Fu Stranot

[date]

MEMORANDUM

SUBJECT:

A & B Aluminum and brass Foundry, Dallas, Texas, (EPA I.D. Number TX0000005421) Consent Agreement and Consent Order (CACO), (RCRA VI-505-H, issued September 30, 1996).

FROM:

David Vogler

RCRA OK/TX Permits Section (6PD-0)

TO:

Desi Crouther, Chief

Hazardous Waste Enforcement Branch (6EN-H)

THRU:

William Gallagher, Chief

RCRA OK/TX Permits Section (6PD-0)

This memorandum is regarding the review of the Closure Plan (dated May 30, 1997) for the subject facility. The plan has been reviewed as requested by you.

The review indicated that the closure plan is adequate in concept but lacks specific technical details. Several deficient areas are identified in the completed checklist and comments. Both of these are attached for your consideration.

If you have any questions about this matter, please call me at x7428.

Attachments

Computer: J: 6PD-0/enf-close.mem

6PD-0/enf-ab.com

Comments Closure Plan Dated May 30, 1997 A&B Aluminum and Brass Foundry Dallas, Texas EPA I.D. No. TX0000005421

- 1. **General:** The closure plan appears to be adequate in concept. However, the plan lacks sufficient details in several areas to be considered technically complete.
- 2. **Waste Management, Page 4:** This section is not clear as to the exact nature of the wastes in the landfill. The waste analysis should be included or be referred to as located in an appendix. The hazardous constituents of concern should be discussed. Also, if other solid or hazardous waste management units are present on the site, these should be mentioned.
- 3. **Geologic and Hydogeologic Setting, Page 6-7:** The presence or absence of an uppermost aquifer is not discussed and should be considered. The impact of the unlined landfill on the uppermost aquifer should be discussed. Any releases to the uppermost aquifer above Maximum Contaminant Levels (MCLs) or health-based concentrations would preclude a clean closure or closure under Texas Risk Reduction Rules Standard Number 1 or 2. The plan does not state the method for meeting Texas Risk Reduction Standards Number 1 or 2 criteria for ground water. No information is provided regarding the presence or absence of ground water monitoring. More details are needed regarding these subjects as related to the closure of the landfill.
- 4. **Air Monitoring, Page 10:** The two figures 0.20 micrograms per cubic meter and 0.20 mg/m³ do not match. This action level should be corrected to the same unit. The concentration of 0.20 mg/m³ should be verified against NIOSH and OSHA standards as the concentration level appears to be above acceptable levels of 0.100 mg/ m³ and 0.050 mg/m³, respectfully (assuming that dust is lead dust).
- 5. **5.0 Closure Activities, Page 11:** The paragraph states that the site will be closed under Risk Reduction Rule No. 1 or 2 criteria without institutional controls. This is incorrect as Risk Reduction Rule No. 2 criteria require a deed notification.
- 6. **Material Treatment, Page 11-12:** Assurances should be provided that the phosphate additive does not contain any hazardous constituents and that the treatment is not a simple dilution process.
- 7. **Material Management, Page 12-13:** More detail should be provided as to the equipment to be used, and the decontamination procedures for the equipment. The plan should discuss the presence or absence of any structures or debris to be treated and disposed.

The plan should contain more detail as to the procedures to be employed in moving and transporting the material and the precautions to be employed to prevent exposure during management. Safety precautions should be detailed including adherence to OSHA standards.

- 8. **Verification Sampling, page 13:** The closure criteria are denoted as "specified under Risk Reduction Standard No. 1 or 2." It is suggested that the closure plan include exact closure criteria that are agreed upon by all parties.
- 9. Closure Certification: A separate section should be added as to the closure certification activities to be considered. Testing and analysis to be performed, criteria for evaluating adequacy, schedules of inspections, types of documentation including types of reports to be generated, and other certification activities should be detailed.
- 10. **Sampling Procedures, Page 13-14:** There is a lack of information regarding analytical procedures including quality assurance and quality control which should be covered by the plan. Also, data validation and data handling procedures should be discussed.
- 11. **Closure Schedule:** A section should be added indicating a closure schedule including an expected year of closure and time to close. Other milestones should be charted including mobilization, treatment, removal, disposal, verification sampling, site restoration, and certification of closure.
- 12. **6.0 Estimated Cost, Page 15:** The estimated costs may need updated.
- 13. **Contingency Plan:** A contingency plan should be outlined in case that the Texas Risk Reduction Standards No. 1 or 2 cannot be met for either soils or ground water. Standard No. 3 would be the alternative closure method.

STANDARD CHECKLIST FOR EPA TECHNICAL REVIEWS CLOSURE PLANS -LANDFILLS

Fac Name: 🔣	TAB FOUNDAY
EPA ID #:	:0000005421
Document Title/date:	AY 30, 1997
Reviewed by:	
EAH-State POC/tel #:	Doroth, Crawford 7107
Date of review:	10/2/1997

	REQU	REMEN	T MET?			
REQUIREMENT	YES	NO	N/A	COMMENTS		
Does RCRIS (event code/status) accurately reflect document/status reviewed?			×.			
REGULATORY REQUIREMENTS						
Facility Description						
1. Has a general description of the facility been given, with locational data, map?				264.111/265.111 PP 1-5 F16 2-1, 2-2		
2. Is a list of other waste management units at the site, and the units to be closed provided? Wastes handled in each listed?				Not specific		
3. Hydrogeologic data provided? Ground water and soil conditions, monitoring systems described, corrective actions detailed?	V	/		pp6 uppermest major aguiter. Does not describe upper most aguiter. Does not address leaching to .		
4. Landfill Description						

	REQUI	REMEN	r met?	
REQUIREMENT	YES	NO	N/A	COMMENTS
4a. Wastes managed (EPA # and quantities)	/			general p4 60×150×5
4b. Size (areal dimensions & depth)	1/			general P4 60x 150xs
4c. Number of landfill trenches or cells (including engineering drawings)			/	
4d. Maximum number and size of trenches or cells ever open at any time (existing or proposed)			/	
4e. Liner systems			, i/	
4f. Leachate collection systems			i/	
4g. Run-on and run-off control systems				general p8, 9, 10
5. References to other environmental permits (NPDES, TSCA, UIC, etc.)			/	
6. Are there anticipated waivers or exemptions?	:		V	
Closure Procedures				
Estimates Of Maximum Quantity Of Inventory (by waste type) To Be Landfilled (consistent with land disposal restrictions under Part 268):				264.112(b)(3)/265.112(b)(3)
1a. Containerized wastes			1	
1b. Bulk wastes	V			g 8 1500 yds3

	REQU	REMEN	r met?		
REQUIREMENT	YES	NO	N/A	COMMENTS	
1c. Decontamination wastes		/			
1d. Demolition wastes		V			
1e. Contaminated soil (from other activities)	/	·		upper 6" p 2	
2. Procedures For Disposing Of Inventory And Other Wastes:	-			264.228(a)/265.228(c)	
2a. Closure Cell Construction i)Trench excavation & liner installation ii)leachate system installation iii)run-on and run-off control system iv) ground water monitoring system			·V		
2b. Procedures for landfilling wastes i) equipment to be used ii) special requirements for incompatible, ignitable or reactive wastes iii) soil, other material, and labor requirements		V	Ø.		

	REQUI	REMEN	MET?			
REQUIREMENT	YES	NO	N/A	COMMENTS		
2c. Procedures For Decontamination And/Or Disposal i) Equipment/structure decontamination ii) Cleaning agent/rinse water treatment or disposal (address quantities, waste types, and methods such as on-site or off-site) iii) Equipment/structures demolition						
and removal (address quantities and methods such as on-site or off-site)		, in the second second				
2d. Procedures for contaminated soil removal and disposal (landfilling activities) i) list or sketch of potentially contaminated areas ii)criteria for determining contamination iii) estimated amount of contaminated soil to be removed	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					
2e. Procedures for managing incident precipitation: i) amount to be removed from cell and method of treatment/disposal ii) amount to be managed via leachate system (after closure)	V .		K.			
3. Final Cover Design (including engineering drawings):			V	264.310/265.310		
3a. Area covered			V			

	REQUI	REMEN	T MET?	
REQUIREMENT	YES	NO	N/A	COMMENTS
3b. Cover Characteristics: i) material type ii) permeability	:		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
iii) depth iv) slope v) drainage structures vi) vegetation			V	
3c. Installation procedures (equipment and labor requirements)			1	
4. Ground Water Monitoring:			1	264.112(b)(5)/265.112(b)(5); 264.90/265.90
4a. Types of analyses: i) number, location and frequency ii) procedures for analyses			V	
4b. Maintenance of equipment			V	
5. Leachate Management:			/	264.112(b)(5)/265.112(b)(5); 264.301(a)(2)
5a. Estimate of volumes collected		<u> </u>	V	
5b. Treatment and disposal methods f)on-site ii)off-site	Y :		# C	
6. Gas Collection And Control:			V	264.112(b)(5)/265.112(b)(5)
6a. Well location and pipeline configuration	:		V	
6h, Gas processing facility			V	
7. Description of Security Systems:		}	} ,	264.14(b) and (c)/265.14(b) and (c)

<u>~</u>~

	REQUI	REMENT	MET?	COMMENTS		
REQUIREMENT	YES	NO	N/A			
7a. Existing facility fence maintenance	€/ I			goneral (p 9-10 fis 5-5) very brief		
7b. Additional fencing at closure	1	•		fig 5-5 / very brief		
7c. Other security equipment	V			1		
8. Survey plat				264.116/265.116 pll without institutional Controls		
9. Closure Certification		V		264.115/265.115		
9a. Activities to be conducted?		i/				
9b. Testing and analyses to be performed?		V				
9c. Criteria for evaluating adequacy?		/		P. 8,11 Rl Std. No 102 2.		
9d. Schedule of inspections?	:	i/				
9e. Types of documentation?	:	V				
CLOSURE SCHEDULE				264.112(b)(6)/265.112(b)(6)		
1. Expected year of closure?	·	V		264.112(b)(7)/265.112(b)(7)		
2. Partial Closures/frequencies?			/			
3. Milestone Chart Showing Time For:		V				
3a. Closure cell construction		1				
3b. Inventory disposal in landfill		V		264.113(a)/265.113(a)		
3c. Contaminated soil disposal						
3d. Closure cover installation	:					

tertugueg Plan

	REQUI	REMEN	r met?	
REQUIREMENT	YES	NO	N/A	COMMENTS
3e. Waste disposal via other methods			V	
3f. Total time to close		1		264.113(b)/265.113(b)
4. Request for extension to deadlines for handling inventory or completing closure?			-1	264.113(c)/265.113(c)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

AUG 2 2 1997

SUBJECT:

A&B Aluminum and Brass Foundry, Dallas, Texas,

(EPA I.D. Number TX0000005421),

Consent Agreement and Consent Order (CACO),

(RCRA VI-505-H, issued September 39, 1996)

FROM: Desi Crouther, Chief Hazardous Waste Enforcement Branch (6EN-H)

TO:

William Gallagher, Chief

Oklahoma/Texas Section (6PD-PT)

This memo is regarding the recent submittal of a Closure Plan (dated May 30, 1997) for the subject facility. We have attached a copy for your use. The submittal was required by the first sentence of paragraph 4 found in part III of the facility's CACO. Please review this initial submittal of the facility's Closure Plan, and provide us with comments by September 26, 1997.

To assist you in your review of the Closure Plan we have also attached a copy of part III of the CACO. The facility has submitted an Interim Measures Work Plan (dated June 18, 1997), which included its groundwater monitoring plan. We recently provided the facility with comments on its Interim Measures Work Plan.

The staff contact on this matter is Ms. Dorothy Crawford (6EN-HT). If you have any questions about this matter please feel free to call Ms. Crawford, at x-7107. Your attention to this matter is appreciated.

Attachments

Mr Gallagher, a copy of the AAD is descured that your would staff your love the staff your with with your thank your borothy HI lothy I'm

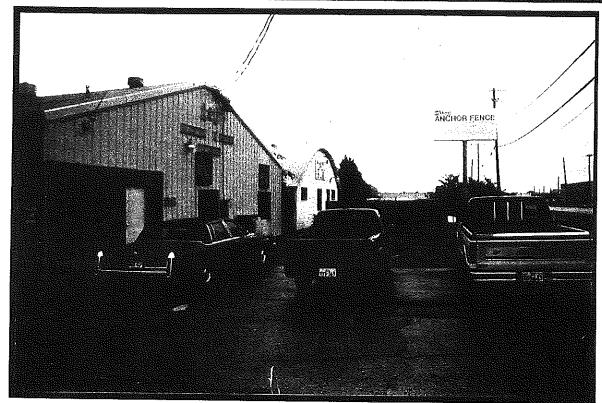
TX0 000 005421 ORDER W-505-H A&B Foundry Closure Plan Dated May 30 1997

TABLE OF CONTENTS

APPENDIX C

			LESK COP	_
1.0	EXECUTIVE	ESUMMARY	orb	ť
2.0	INTRODUC Site Operatio Waste Manag Site History General Site	TION ons gement Overview Hydrogeologic Setting	671 3 54 4 5	,
3.0	STATEMEN	T OF WORK	8	
4.0	Work Zones Engineering (RATION	9 9	
5.0	Material Trea Material Man Verification S Sampling Pro	CTIVITIES tment agement Sampling cedures		
6.0	ES'TIMATED	COST	15	
APPE	NDIX A	CORRESPONDENCE		
APPE:	NDIX B	WASTE STREAM CHARACTERIZATION DOCUMENTA	rion	

PREVIOUS WASTE TREATMENT AND DISPOSAL DOCUMENTATION



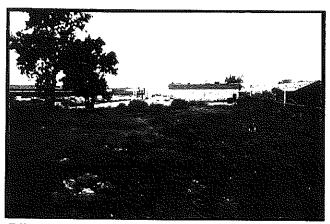
Aluminum and Brass Foundry located at 11165 Denton Drive in Dallas, Texas

1.0 EXECUTIVE SUMMARY

his Closure Plan addresses environmental concerns at the A&B Foundry facility (the Site) located at 11165 Denton Drive in Dallas, Texas. The foundry facility has been used for processing aluminum and brass ingots into cast metal products since 1965. A&B Foundry melts aluminum, yellow brass, and red brass ingots with a furnace and casts the molten metal in sand molds created from wood prototypes. The poured molds are allowed to cool on conveyors prior to removal from the mold. The gates and sand are removed from the cast metal product and reused. The cast metal products are then deburred, finished, and prepared for shipping.

The most significant waste stream at the facility is the spent foundry mold sand which consists of several different types. The mold sand is determined by the raw material being used, and most of the sand can be reused to some extent. Historical product and waste management practices did not segregate the various types of sand and other solid waste streams. The mixed sand and other minor solid waste streams were used as fill material in a low lying area behind the facility. Currently, the fill material area is approximately 60 feet by 150 feet and extends to a depth of approximately 5 feet. Placement of the fill material by A&B Foundry ceased in 1993 after an EPA inspection.

During 1994 and 1995, ENTACT assisted A&B Foundry with waste stream identification and segregation, cost analysis, subcontractors, and waste characterization. During this waste characterization process, it was determined that lead was the main constituent of concern and the dark green sand would not exhibit the hazardous waste characteristic for lead if the sand is not reused so extensively. A&B Foundry began to segregate waste streams and manage the foundry sand more effectively.



Fill material area located on the west portion of the facility

This Closure Plan summarizes the previous environmental audits and describes the tasks which will be performed as a part of the Consent Agreement and Consent Order (CACO) between A&B Foundry, the Environmental Protection Agency (EPA), and the Texas Natural Resource Conservation Commission (TNRCC) signed September 30, 1996. In general, the CACO includes provisions for an escrow fund to address environmental concerns, interim measures while the sufficient funds are placed in escrow over the course of a 5½ year period, and the ultimate clean closure

of the fill material area west of the main facility. In accordance with 31 TAC §335.112 (a)(6) and 40 CFR Part 265, Subpart G, this Closure Plan specifically addresses the closure plan for the hazardous waste landfill.

This plan addresses one phase of the overall scope of work for the A&B Foundry facility and focuses only on removing lead impacted foundry sand from the fill material area located west of the main building. The impacted media includes core sand, silica sand, and green mold sand formerly used inside the foundry for casting metal products. The foundry sand and six (6) inches of underlying clay will be treated in-situ and removed from fill material area and transported for off-site disposal as a Class II waste. The removed volumes are anticipated to be approximately 1,500 cubic yards. Upon completion of the removal activities, recordation sampling and site restoration will be conducted.

During the closure activities, ENTACT will install engineering controls to prevent off-site migration of lead through wind blown dust and storm water runoff. ENTACT will conduct air monitoring around the site to demonstrate air emission control. Stormwater controls will be installed to contain sediment transported by stormwater that falls on-site.

Site operations including mobilization, treatment, excavation and sampling are scheduled to be completed within a three (3) week time frame. ENTACT will aggressively approach the site and perform in-situ stabilization, excavation, sampling, and loadout operations simultaneously to enhance efficiency.



West portion of the A&B Foundry located at 11165 Denton Drive in Dallas, Texas

2.0 INTRODUCTION

NTACT, Inc. was retained by Aluminum and Brass (A&B) Foundry to develop a closure plan to address environmental concerns at the manufacturing facility located at 11165 Denton Drive in Dallas, Texas (the Site). The facility is used for processing aluminum and brass ingots into cast metal products. The general site location is depicted in Figure 2-1.

This Closure Plan summarizes the previous environmental audits and describes the tasks which will be performed as a part of the Consent Agreement and Consent Order (CACO) between A&B Foundry, the Environmental Protection Agency (EPA), and the Texas Natural Resource Conservation

Commission (TNRCC) signed September 30, 1996. In accordance with 31 TAC §335.112 (a)(6) and 40 CFR Part 265, Subpart G, this Closure Plan specifically addresses the closure plan for the hazardous waste landfill. An Interim containment measures work plan has been submitted under separate cover.

SITE OPERATIONS

&B Foundry is situated on approximately 1-acre and has been in operation since 1965. Refer to Figure 2-2. The foundry produces approximately 3,000 pounds of aluminum castings per month and 4,000 pounds



of brass castings per month. Of the brass castings, only 20% are red brass. Occasionally, semi-red brass, bronze, and aluminum alloys are also used as raw material.

A&B Foundry melts aluminum, yellow brass, and red brass ingots (20-30 pounds) with a furnace and casts the molten metal in sand molds created from wood prototypes. The poured molds are allowed to cool on conveyors prior to removal from the mold. The gates and sand are removed from the cast metal product and reused. The cast metal products are then deburred, finished, and prepared for shipping.

WASTE MANAGEMENT

n general, brass is composed of copper, zinc, tin, and lead. Yellow brass contains 2% lead and red brass contains 5% lead. In addition to raw materials, mold release agents, flux additives, resins, core pastes, and binders are added in the molding process.

Waste streams at the foundry include aluminum and brass slag, grinding dust, used foundry sand, blast sand, and minor amounts of waste oil, antique black rinsate, and general trash. The slag and grinding dust are currently recycled at the GNB facility in Frisco, Texas. The used foundry sand consists of several different types and is determined by the raw material being used and mold characteristics. Hard core sand, yellow, is used for aluminum castings and cannot be reused. White silica sand is used for brass castings, but it becomes dark green after the initial use. The dark green mold sand intermingles with metal fragments from the castings. The dark green sand is used repetitively and accumulates metal fragments through reuse. The silica sand and core sand are not reused and do not become saturated with metal fragments.



Various types of mold sand in the fill material area

Historical product and waste management practices did not segregate the various types of sand and other solid waste streams. The mixed sand and other minor solid waste streams which could not be recycled were used as fill material in a low lying area behind the facility. Currently, the fill material area is approximately 60 feet by 150 feet and extends to a depth of approximately 5 feet. Placement of the fill material by A&B Foundry ceased in 1993 after an EPA inspection.



Fill material area located on the west portion of the property



Paved parking area south of the foundry building

SITE HISTORY

n August 10, 1993, an unannounced Compliance Evaluation Inspection was performed by Metcalf & Eddy, Inc., Technical Enforcement Support for the EPA, and representatives of the US EPA Region 6, at the A&B Foundry facility. The investigation consisted of an interview with Mr. Bob Lindsay, the facility owner/operator, concerning waste management practices, waste documentation, and observations during the site walkthrough. In addition, samples of the fill material, grinding dust, slag, rinsate, and various foundry sands were collected by Metcalf & Eddy. Refer to Appendix A - Correspondence.

On January 13, 1994, A&B Foundry received a letter from the EPA Region 6 stating that the analytical results from the inspection indicated that A&B Foundry did manage hazardous waste and assigned the EPA Id. No. TX0000005421. In addition, the EPA requesting a meeting to discuss the alleged violations.

During 1994 and 1995, ENTACT assisted A&B Foundry with waste stream identification and segregation, cost analysis, subcontractors, and waste characterization. During this waste

characterization process, it was determined that lead is the main constituent of concern and the dark green sand would not have hazardous characteristics for lead if the sand was not reused so extensively. A&B Foundry began to segregate waste streams and manage the foundry sand more effectively. Refer to Appendix B for waste characterization documentation.

On April 18, 1995, ENTACT, A&B Foundry, the TNRCC, and EPA Region 6 attended a technical meeting to discuss closure options for the fill material area. A mutual agreement between the involved parties was developed to allow A&B Foundry time to save remediation funds into an escrow account while being protective of human health and the environment. This mutual agreement was formalized into the CACO.

In the fall of 1995, ENTACT characterized, stabilized, and disposed of drummed foundry sand located in the facility parking area. The drummed material was generated after the foundry ceased use of the fill material area. Upon treatment and sample analysis, the foundry sand was disposed of as a Class II waste. Refer to Appendix C for waste treatment information.

GENERAL SITE OVERVIEW

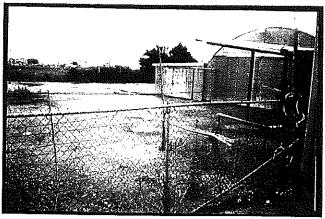
he general area surrounding the facility is industrial and light industrial. Anchor Fence Supply is adjacent to the north property line of the facility. Denton Drive borders the east side of the Site. The south side of the facility is bordered by PR Diamond, an appliance part distributor, and the west property line is adjacent to an asphalt parking lot and a night club.



Adjacent properties south of A&B Foundry



Properties west of the fill material area



Adjacent property north of A&B Foundry

GEOLOGIC AND HYDROGEOLOGIC SETTING

Geologic Characteristics

he soil at the Site consists of Houston Black-Urban land complex, 0 to 4 percent slopes. The Houston Black complex consists of gently sloping, moderately well drained soils. These soils formed in the clayey marine sediment on the uplands. Refer to Soil Survey Map.

Houston Black-Urban land complex is well drained with a very slow permeability. This soil has a high available water capacity with a medium runoff rate. The Houston Black series consists of dark gray to black moderately alkaline clay to a depth of 70 inches. The Houston Black-Urban land complex consists of approximately 40 percent Houston Black and 35 percent Urban land. Urban land areas are defined by the Department of Agriculture Soil Conservation Service as areas which are covered with such works and structures as streets, sidewalks, buildings, driveways, cemeteries, and patios. The percentage of Urban land in this complex covered by works and structures ranges from 25 to 75. The characteristics of this soil that should be considered in urban development design are shrink-swell potential, corrosivity, and low strength.

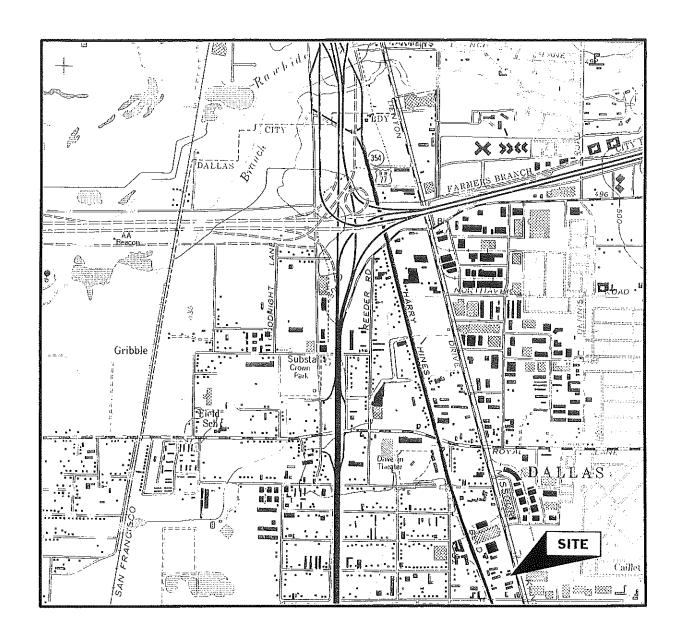
Hydrogeologic Characteristics

The Site is located above the Woodbine Group. The Woodbine Group, located about 250 feet above sea level, is the uppermost major aquifer. The Woodbine Group provides water for the majority of Dallas County. The group is divided into three water-bearing parts, upper, middle, and lower, which vary considerably in productivity and quality. The total thickness of

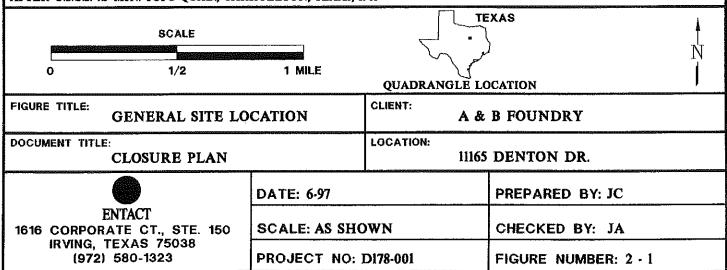
the Woodbine ranges from 230 feet at the outcrop to 700 feet at the downdip limit of fresh to slightly saline water. The chemical quality deteriorates rapidly in well depths below 1,500 feet. The water in the Woodbine is considered to be soft with most chemical analyses showing a total hardness as calcium carbonate below 60 mg/l. Yields of wells completed in the Woodbine averaged 160

gal/min. Wells operating under artisan conditions are experiencing declines in water levels. The steady decline is a result of low permeabilities in water-bearing sands and large withdrawals by ground water users. However, at the present withdrawal rate, when considered collectively, the aquifer is in no immediate danger of overdevelopment.





AFTER U.S.G.S. 7.5 MIN. TOPO QUAD, CARROLLTON, TEXAS, 1981



A & B Foundry

GENERAL FACILITY

CONCRETE PARKING AREA

STORA
TRAIL

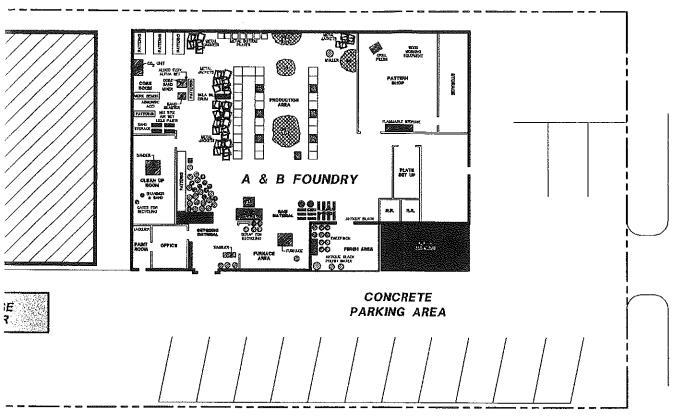
CONCRETE PARKING AREA

LAYOUT DIAGRAM



ANCHOR FENCE

HALT SURFACING



DENTON DRIVE

3.0 STATEMENT OF WORK

he overall scope of work for the A&B Foundry is being implemented pursuant to the Consent Agreement/Consent Order (CACO) issued on September 30, 1996. In general, the CACO includes provisions for an escrow fund to address environmental concerns, interim measures while the sufficient funds are placed in escrow over the course of a 5½ year period, and the ultimate closure of the fill material area west of the main facility.

This plan addresses one phase of the overall scope of work for the A&B Foundry facility and focuses only on removing lead impacted foundry sand from the fill material area and closing the area. The area will be closed under the TNRCC Risk Reduction Standard No. 1 or 2 criteria.

The impacted media includes core sand, silica sand, and green mold sand formerly used inside the foundry for casting metal products. The underlying dark clay layer has possibly been impacted by the fill material to a depth of 2 to 4 inches. As a conservative approach, ENTACT will remove the upper six (6) inches of the underlying dark clay layer. This underlying six (6) inch layer will be treated and removed with the fill material.

The foundry sand and six (6) inches of underlying clay will be treated in-situ and removed from fill material area and transported for off-site disposal as a Class II waste. The removed volumes are anticipated to be approximately 1,500 cubic yards. Upon completion of the removal activities, recordation sampling and site restoration will be conducted.

During the closure activities, ENTACT will install engineering controls to prevent off-site migration of lead through wind blown dust and storm water runoff. ENTACT will conduct air monitoring around the site to demonstrate air emission control. Stormwater controls will be installed to contain sediment transported by stormwater that falls on-site.

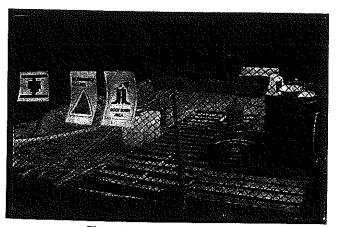
Site operations including mobilization, in-situ treatment, excavation and sampling are scheduled to be completed within a three (3) week time frame. ENTACT will aggressively approach the site and perform stabilization, excavation, sampling, and loadout operations simultaneously to enhance efficiency.

4.0 SITE PREPARATION

ite preparation operations will be conducted in conjunction with the mobilization portion of the project. In an effort to prepare for efficient soil treatment and material management, ENTACT will align numerous aspects of site control. Site inspection protocol and documentation will be established.

ENTACT will hold an on-site safety meeting and discuss goals with the project team members. Access restrictions will be implemented to control traffic through the treatment area. Storm water controls, air monitors, and dust suppression units will be installed in the work zone. The treatment equipment will be inspected and installed upon arrival.

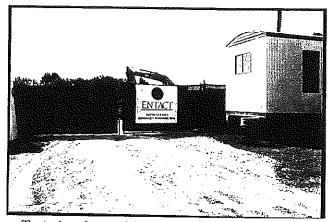
Access controls will begin with securing the impacted work area and controlling site access. Appropriate documentation of visitors and other on-site personnel will be collected on a sign in log kept by ENTACT. Appropriate signage will be posted to designate restricted areas. Refer to Figure 4-3.



Typical decontamination area

WORK ZONES

ork zones will be established and enforced during corrective action procedures. Portable decontamination zones for equipment and/or personnel will be constructed adjacent to the work zone. The support zone will consist of sanitary facilities and associated parking areas.



Typical work zone delineation and engineering controls

ENGINEERING CONTROLS

mission control measures will consist of dust emission controls, site security, storm water run-off controls, and the establishment of work zones.

Temporary access gates will be demarcated and a woven mesh screen will be attached to the chain-link fencing to serve as a visual barricade and a dust control mechanism. The mesh screen will be approximately six (6) feet high and properly secured to the fencing to ensure durability.

Necessary engineering controls will be established to minimize visible emissions during site activities. Water will be utilized as necessary to mist areas during stabilization, excavation, and loading procedures. Care will be taken to avoid the creation of run-off during misting.

Stormwater management controls will be installed along the interior perimeter of the security fence. Silt fences will be installed to assist with run-off control.

AIR MONITORING

NTACT will initiate baseline air monitoring during mobilization operations. Low volume air monitors will be placed on the four (4) corners of the work area. A Mini-RAM will be placed down gradient to the work area. Air monitoring will be conducted to gather data specific to airborne lead and dust

concentrations. Samples will be submitted for laboratory analysis (total lead) on a daily basis. Air monitoring will also be conducted in the work zone to monitor associate worker exposure.

To assist with daily monitoring, a hand-held Random Air Monitor (RAM) will be utilized to record periodic ambient air conditions. An 8 hour Time Weighted Average will be collected in and around the work zone. If a reading exceeds 0.20 micrograms per cubic meter (a conservative approach which assumes that all dust is lead dust), then corrective measures regarding dust suppression will be increased. If the action level of 0.20 mg/m³ is determined to be unreliable in predicting the laboratory results from the low volume air monitoring exceedances, then the action level will be reevaluated.

Necessary engineering controls will be established to minimize visible emissions during site activities. Water will be utilized as necessary to mist areas during stabilization, excavation, and loading procedures. Care will be taken to avoid the creation of run-off during misting.

Stormwater management controls will be installed along the interior perimeter of the security fence. Silt fences will be installed to assist with run-off control.

AIR MONITORING

NTACT will initiate baseline air monitoring during mobilization operations. Low volume air monitors will be placed on the four (4) corners of the work area. A Mini-RAM will be placed down gradient to the work area. Air monitoring will be conducted to gather data specific to airborne lead and dust

concentrations. Samples will be submitted for laboratory analysis (total lead) on a daily basis. Air monitoring will also be conducted in the work zone to monitor associate worker exposure.

To assist with daily monitoring, a hand-held Random Air Monitor (RAM) will be utilized to record periodic ambient air conditions. An 8 hour Time Weighted Average will be collected in and around the work zone. If a reading exceeds 0.20 micrograms per cubic meter (a conservative approach which assumes that all dust is lead dust), then corrective measures regarding dust suppression will be increased. If the action level of 0.20 mg/m³ is determined to be unreliable in predicting the laboratory results from the low volume air monitoring exceedances, then the action level will be reevaluated.



TION DIAGRAM



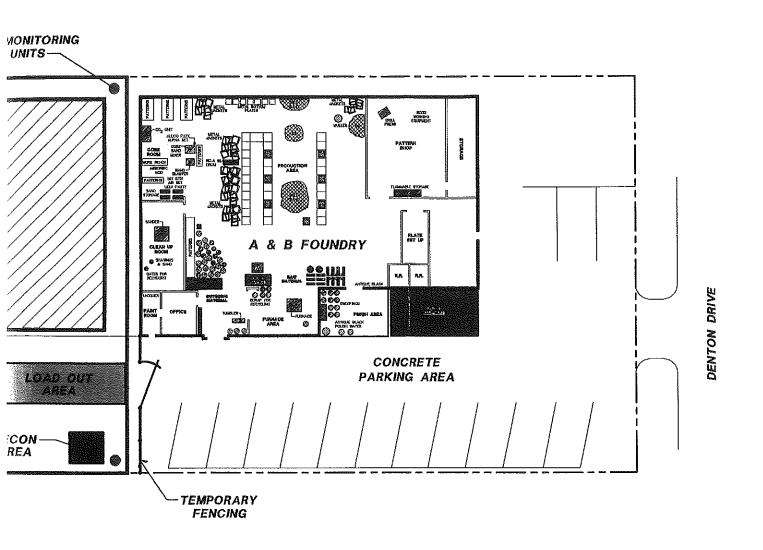


FIGURE 4-3

A & B Foundry

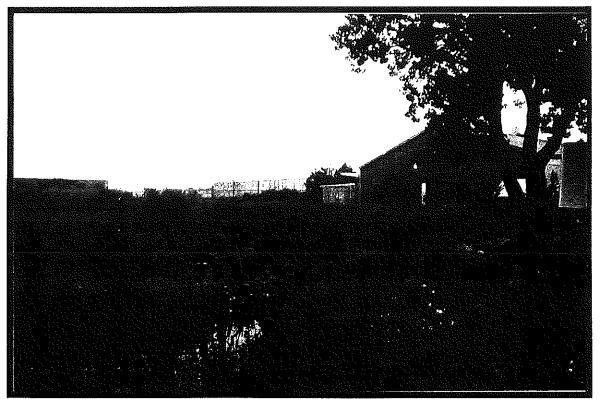
SITE PREPARA

TEMPORARY
FENCING

RESTRICTED AREA
WITH WIND SCREEN
— & SILT FENCING

DE AI

EXISTING FENCE



Fill material area located west of the A&B Foundry facility

5.0 CLOSURE ACTIVITIES

pon completion of site preparation and mobilization activities, ENTACT will begin to address the fill material area. The foundry sand and six (6) inches of underlying clay will be in-situ treated and removed from fill material area for sampling and transported for off-site disposal as a Class II non-hazardous waste. The removed volumes are anticipated to be approximately 1,500 cubic yards. Upon completion of the removal activities, verification sampling and site restoration will be conducted. The Site will be closed under 31 TAC § 335.551-335.569 Risk Reduction Standard No. 1 or 2 criteria without institutional controls. These activities are being conducted pursuant to the CACO. All interim measures and

groundwater issues are addressed under separate cover.

MATERIAL TREATMENT

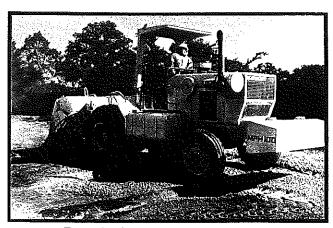
· 60 , .

ver the past several years, ENTACT designed and patented a phosphate based stabilization additive which can be used in smaller ratios to chemically and physically immobilize most hazardous metal constituents in soil. The treatment process involves the mixing of the reagent with the material, confirmation sampling, and off-site landfilling of Doo it contain mothers? the treated material.

ENTACT

Based on pilot testing and site characteristics, stabilization is the most efficient and cost effective treatment technology for the Site. The limited work area, constituents of concern, sandy material, and physical shape of the deposited material lends itself well to in-situ treatment to stabilize the on-site soils. In-situ treatment will allow the stabilization to occur inside the area of contamination, thus reducing material handling, material movement, cross-contamination potential, while increasing available material load-out area.

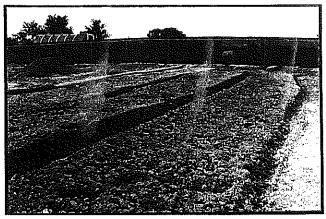
Based on previous in-field pilot testing performed on the drummed foundry sand material in 1995, a phosphate additive ratio of 5-8% achieved Class II waste criteria. Original sample results for the drummed foundry sand ranged from 0.446 to 24.9 mg/l, averaged 9.43 mg/l, TCLP Lead. After treatment, the material was below 0.05 mg/l TCLP Lead. Refer to Appendix C. The stabilization process clearly achieved the Class II waste criteria, 1.5 mg/l TCLP Lead, without adding volume usually associated with a portland cement additive.



Example of in-situ treatment operations

The mixing of the reagent with the material will be performed in-situ with a Bomag recycler. The phosphate additive will be applied with a

mobile meter applicator in a 5-8% ratio and homogenized with the impacted material in 12 inch lifts with the Bomag. The high speed in-situ treatment occurs under the mixing cover of the Bomag. A fine water mist will be applied during this process to assist the chemical reaction and suppress dust emissions. The Bomag will pass over the lifts in overlapping rows to ensure stabilization of the underlying materials. The stabilized material is moved within the area of contamination into a stockpile, and the in-situ treatment method is repeated in lifts. Refer to Figure 5-4.



Example of stabilized soil after in-situ treatment

MATERIAL MANAGEMENT

ollowing stabilization, treated soils will be excavated and staged in 200 cubic yard stockpiles. Each stockpile will be demarcated and sampled. Field notes will be completed and will include identification and storage location of the batch being sampled, sample number, data and other pertinent information. The stockpiles will be sampled and analyzed at 200 cubic yard intervals for TCLP Lead analysis (EPA Method 1311/6010) to confirm stabilization below 1.5 mg/l. If a sample result indicates that treatment did not achieve the Class II non-hazardous standard, the entire



batch will be retreated with additional additive within the area of contamination. Although none of the previous sampling activities indicated a metal constituent of concern other than lead, an initial stockpile of stabilized material will also be analyzed to TCLP RCRA metals to ensure that no other metals are a concern.

Upon confirmation of the stabilization process and receipt of a state waste code, the stockpiled material will be loaded and transported for disposal as a Class II waste at a local landfill. A non-hazardous waste manifest will accompany each load of material to the landfill for tracking purposes. Material volumes will be based upon the manifested loads of material.



Example of material load-out operations

VERIFICATION SAMPLING

pon completion of the removal activities from the area of contamination, verification samples will be collected to document achievement of the target cleanup criteria specified under Risk Reduction Standard No. 1 or 2. Verification samples will only be analyzed for total lead (EPA Method 6010) unless additional constituents of concern are identified during the stockpile analysis. A

coordinate system will be devised in order to provide for tracking sampling and excavation activities in the field. The former fill material area will be delineated into 25 square foot grid sections starting from the north a west fence lines. The grid sections will be flagged on the fence line and staked upon completion of the removal activities. Samples will be composited from five (5) grab sample points from the delineated grid section. The purpose of the grid system is to provide specific reference points over the site and to enhance documentation with regard to sample nomenclature. Refer to Figure 5-5.



Example of sampling activities

SAMPLING PROCEDURES

he objectives of the sampling procedures and field measurements are to obtain samples and measurements that accurately and precisely represent field conditions during and after removal activities. Trace levels of contaminants from external sources must be eliminated through the use of proper sampling techniques, disposable sampling equipment, proper decontamination procedures, and experienced field personnel.

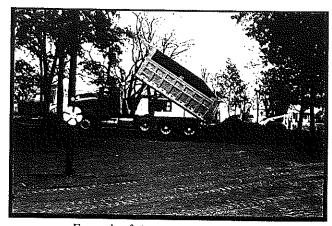
Quality assurance procedures such as tracking, reviewing, and auditing are implemented as necessary to ensure that all project work is performed in accordance with professional standards, regulations and guidelines, and specific project goals and requirements.

ENTACT will collect samples from the treated stockpiles, residual surface soils, and imported backfill, if necessary, to confirm objectives. Sampling methods will conform to accepted Environmental Protection Agency (EPA) protocol as outlined in SW-846. All samples collected from the Site will be composited from five (5) points to obtain a representative sample. A 1/4 to 1/2 cup of soil will be retrieved by disposable sample trowel or measuring cup from 5 locations around the 200 cubic yard stockpile or from the specific 25 foot grid area and placed into a clean Ziploc™ bag or plastic bowl and homogenized. The sample point collection volume is increased to ½ cup only when a duplicate sample is required. This method ensures that the volumes from the sample points are equally weighted and no residual sample material is left over when composited.

Quality assurance samples will be included within the sampling procedures to validate the chemical data. One out of 10 samples will be replicated/duplicated as a quality assurance validation of the laboratory against itself. Preparation of equipment rinsate blanks and trip blanks are not anticipated due to the constituents of concern and the use of disposable sampling equipment.

All samples will be placed in sterile pint, airtight, containers provided by the laboratory. Sanitary latex gloves will be used to handle the materials and pack containers to minimize container headspace. The latex sampling gloves and disposable sampling tools will be changed

prior to collecting each sample to prevent cross contamination. Chain of Custody documents will be prepared, sample containers will be labeled in accordance with a predetermined identification system and samples will be sealed and shipped to the laboratory for analysis. Samples will be logged on a Chain of Custody and in a field sample log. Soil samples collected for metal analysis will not be preserved during transport to the laboratory for analysis. Only organic samples collected from the backfill material will be immediately preserved on ice during transport to the laboratory for analysis. Inchape Testing in Richardson, Texas will be used for laboratory analysis.



Example of site restoration activities

SITE RESTORATION

pon completion of the initial closure activities, the former fill material area will be graded to prevent ponding. Clean fill material may be brought in to fill a low lying area. If required, the fill material will be sampled for total RCRA metals and total petroleum hydrocarbons (EPA Method 418.1). Native grass seed will be broadcast to promote vegetation, and silt fencing will be left in place until vegetation is established.

T DIAGRAM

#ONITORING



A & B FOUNDRY

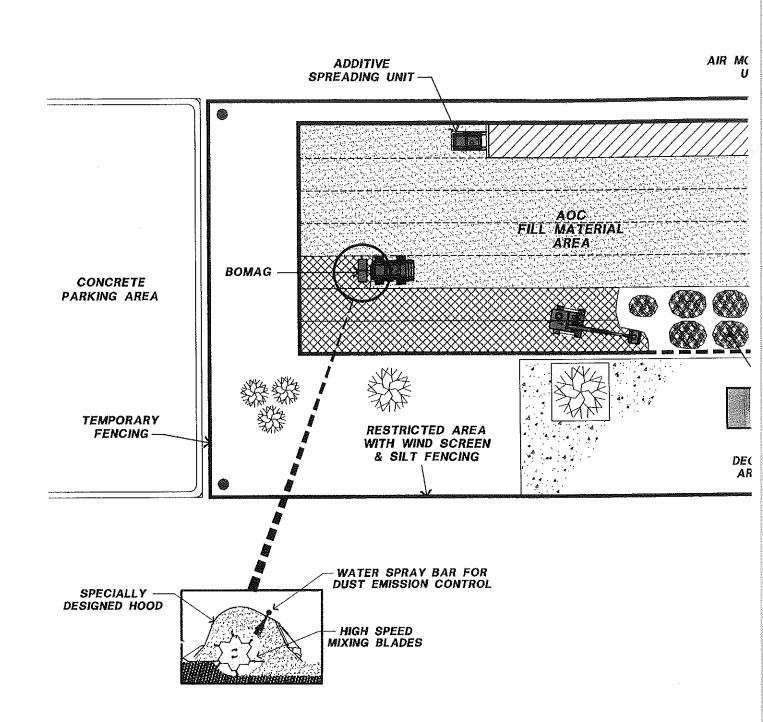
STOCKPILED
STAGING AREA

CONCRETE
PARKING AREA

FIGURE 5-4

A & B Foundry

TREATMEN



DIAGRAM



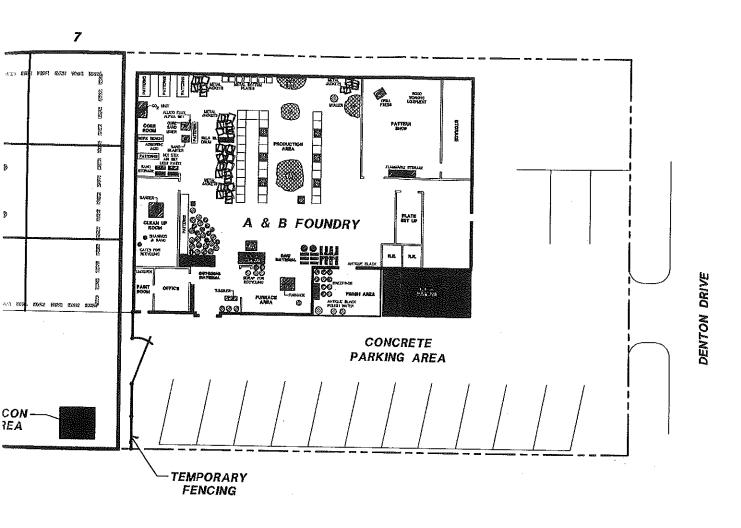
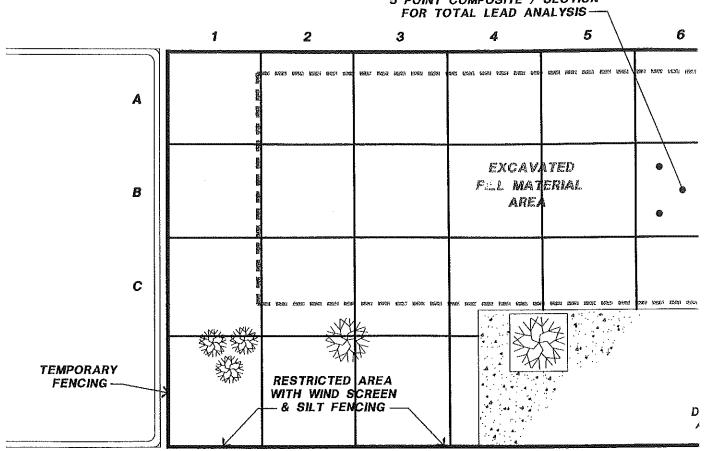


FIGURE 5-5

25' GRID SECTIONS
5 POINT COMPOSITE / SECTION
FOR TOTAL LEAD ANALYSIS—



6.0 ESTIMATED COST

he overall scope of work for the A&B Foundry is being implemented pursuant to the Consent Agreement/Consent Order (CACO). In general, the CACO includes provisions for an escrow fund to address environmental concerns, interim measures while the sufficient funds are placed in escrow over the course of a 5½ year period, and the ultimate closure of the fill material area west of the main facility.

While this Closure Plan addresses one phase of the overall scope of work for the A&B Foundry facility, ENTACT has included the estimated costs for the other phases for confidential evaluation by the involved parties.

All estimated costs are based on 1995 cost data and may change over time due to material costs and regulation changes. Regulation charges may also affect the applicability of this work plan. The following table summarizes the overall costs for the Site.

Description of Activity	Estimated Costs
Interim Containment Measures Work Plan	3,500
Closure Plan	3,500
Implementation of Interim Containment Measures Plan	13,700
Groundwater Monitoring System Installation (4) wells	9,800
Annual Operation and Maintenance of Monitoring Wells including Quarterly Sampling and Analysis for 4 wells	4,500 per year
Implementation of the described Closure Plan based on 1,500 cubic yards Additional volumes will cost \$70-80/cy.	120,000-130,000





APPENDIX A CORRESPONDENCE



An Air & Water Technologies Company

August 27, 1993

Mr. Samuel Tates U.S. EPA Region 6 RCRA Enforcement Branch 1445 Ross Avenue Dallas, Texas 75202

Re:

TES X Work Assignment No. R06028 - TC Inspections

Inspection Report Deliverables

Dear Mr. Tates:

Please find enclosed Metcalf & Eddy's (M&E) RCRA Inspection Report for A&B Foundry, Dallas, Texas. The inspection was performed on August 10, 1993. This document was primarily prepared by Mr. Dave Lewis of M&E's Itasca, Illinois office. Please review this document and provide M&E with any changes that the Agency requires.

Please call me if you have any other questions regarding this report.

Sincerely,

Andrew B. Ellison

Contractor Project Manager

ABE/Ic

enclosure

cc: RPMO File

OD0893.46

VAI.

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 6

TECHNICAL ENFORCEMENT SUPPORT AT HAZARDOUS WASTE SITES

RCRA Inspection Referral Package

for the August 10, 1993 TC/CEI INSPECTION

Conducted at:

A & B FOUNDRY DALLAS, TEXAS EPA ID Number N/A

Work Assignment No. R06028

CONTRACT NO. 68-W9-007

TES X

Work Performed By:

METCALF & EDDY, INC. 1845 Woodall Rogers Freeway, Suite 1620 Dallas, Texas 75201 (214) 754-8725

TABLE OF CONTENTS

								<u>PAGE</u>
EXEC	UTIVE SUM	MARY					 	i
1.0	INTRODUC	TION		.			 	1
2.0	PARTICIPA	NTS					 	1
3.0	INSPECTIO	N PROCEDURES					 	1
4.0	4.1 Was	DESCRIPTION te Streams					 	2
5.0		ACTIVITIES and Sludge Sampli						
6.0	6.1 Reco	FIONS and FINDIN ords Inspection					 	5
7.0	SUMMARY	OF INSPECTION	1				 	5
		L	IST OF ATT	ACHM	1ENTS	1		
АТТА	CHMENT 1	M&E Inspector's	Credentials					
ATTA	CHMENT 2	Inspection Derived	d Documents					
ATTA	CHMENT 3	Chain-of-Custody	Forms					
ATTA	CHMENT 4	Photographs						
ATTA	CHMENT 5	Field Notes						

1.0 INTRODUCTION

On Tuesday, August 10, 1993, an unannounced RCRA Toxicity Rule (TC)/Compliance Evaluation Inspection (CEI) was performed by Metcalf & Eddy, Inc. (M&E) at the A & B Foundry facility located at 11165 Denton Drive, Dallas, Texas. The inspection was conducted under the Technical Enforcement Support (TES X) Contract, Work Assignment R06028, for the U.S. Environmental Protection Agency (EPA), Region 6. This inspection was conducted under the authority of Section 3007 of the Resource Conservation Recovery Act (RCRA), as amended. This narrative report and attachments present the results of the inspection.

This investigation consists of a discussion of the facility's RCRA background, a summary of the facility's waste management practices, observations made during the investigation, document review findings, a description of sampling procedures, a summary of analytical results. The investigation report is supplemented with photographs located in Attachment 4. Documentation received from A & B Foundry during the inspection is included in Attachment 2.

Sampling was also conducted as part of this inspection. A description of sampling procedures, sample media collected, sample identification, and analytical methods used is provided in Section 5.0 Sampling Activities of this report. Analytical results were not available upon preparation of this report and will be presented in a separate cover titled: "RCRA Facility Sampling Report".

2.0 PARTICIPANTS

A & B Foundry was represented by it's owner, Mr. Bob Lindsay. U.S. EPA Region 6 was represented by Mr. Bobby Williams and Michelle O'Mary of U.S. EPA Region 6, and Mssrs. Dave Lewis and Wallace O'Rear of M&E.

3.0 INSPECTION PROCEDURES

Upon arrival at A & B Foundry, the inspectors met with Mr. Lindsay. The inspector's credentials were presented. The inspection purpose and procedures were explained and the Confidentiality of Business Information (CBI) was discussed. Mr. Lindsay indicated that information regarding the foundry was not confidential and there were no restricted areas.

The inspection consisted of a discussion of operations at A & B Foundry, wastes generated, waste management practices, a review of pertinent documents, a tour of the facility and sample collection. A site tour and compliance information was provided by Mr. Lindsay. Sampling activities were conducted by Messrs. Lewis and O'Rear on August 10, 1993.

An exit briefing, including Mr. Lindsay, was conducted by Mr. Williams of EPA at 1420 hours on August 11, 1993. Items discussed during the briefing included potential violations and concerns, sample media, and report preparation procedures.

4.0 FACILITY AND PROCESS DESCRIPTION

The A & B Foundry facility is located at 11165 Denton Drive, Dallas, Texas and encompasses approximately 1 acre. The facility is bordered by Anchor Fence Supply, a fencing wholesaler, to the north, Denton Drive to the east, a company named PR Diamond, business unknown, and to the south and parking lot to the west.

A & B Foundry is an aluminum and brass (both yellow and red) foundry involved in the processing of ingot metals through the use of a furnace and mold procedure. Castings are produced from molten metal and then deburred, finished and occasionally painted before shipping. Currently, A & B Foundry has 15 full time employees. A & B Foundry has been in operation for 28 years. Mr. Lindsay indicated that A & B Foundry produces approximately 2000-3000 pounds of aluminum castings per month. In addition, A & B Foundry produces approximately 4000 pounds of brass castings per month. Mr. Lindsay indicated that approximately 80% of the brass castings are with yellow brass, the remainder with red brass.

Raw materials used for the production of the aluminum castings are 30 pound ingots obtained from Noranda Aluminum located in New Madrid, Missouri. The brass ingots are obtained in 20 pound increments from I. Schumann & Company, Bedford, Ohio. Additionally, parting agents, flux additives, resins, core pastes and binders are utilized during processing of the metals to aid in producing a more workable and higher quality finished product.

There are two dust collection systems in operation at A & B Foundry, the disc sander in the pattern room and the sand blast cabinet. The pattern room is where all of the wooden molds are made. The dust generated in the pattern room is mainly from woodworking and the dust is considered sawdust. The sand blast cabinet utilizes glass beads that "blast" the sand off of the castings. Both of these collected dusts are disposed of on the waste piles.

A small painting room exists on the southwest corner of the facility that is utilized for spray painting of some of the castings prior to shipping. The spent spray paint cans are stored in 35 gallon fiberboard containers. There are approximately five containers of spent spray paint cans. Mr. Lindsay indicated that the cans would be disposed of as general refuse.

4.1 Waste Streams

Aluminum and Brass Slag

Waste aluminum and brass slag is generated from the melting of aluminum and brass. The slag is discarded in a 55 gallon drum which Mr. Lindsay says is picked up by "a guy" from Missouri. Mr. Lindsay did not know the identity or affiliation of the person who removes the slag, nor was he aware of the final disposition of the slag. There is no set pick-up schedule. The person that takes the slag calls to see if A & B Foundry has accumulated any and if so, he will pick up the slag soon thereafter.

Grinding Dust

Grinding dust is generated from the processing of the castings. The grinding dust is allowed to accumulate on the floor of the building at the base of the grinding machine and saw. The dust is collected and placed into 35 gallon fiberboard containers. Mr. Lindsay stated that the grinding dust is taken away by the same people that remove the slag. He believes that the disposition of

the grinding dust is similar to that of the slag.

Used Foundry Sand

Use foundry sand is generated from the shakeout, molding and grinding areas of the foundry. This waste sand is stored in piles immediately west of the foundry. The foundry sand has never been hauled from the facility. For the past 28 years, all waste foundry sand and silica has been disposed of behind the foundry. Prior to disposing of the foundry sand in the back of the facility, Mr. Lindsay stated that there was a four foot dropoff immediately behind the building extending westward toward the property line. The stated disposal pattern has been to fill from the building to the property line. The dimensions of the waste pile are approximately 60 feet by 150 feet and a depth of six to eight feet.

Waste Oil

ď.

In the past, small quantities of waste oil have been generated by the facility from the air compressor. Mr. Lindsay stated when the oil was changed, approximately one quart of waste oil was generated. Furthermore, until approximately seven years ago, the oil was disposed of on the waste piles in the back. Currently, Mr. Lindsay says that the waste oil from the compressor is taken to a local service station and recycled. Mr. Lindsay could not recall the frequency with which the oil in the compressor was changed. Visual inspection of the waste piles worte Cil is in Froiler in glaster bottles identified no oil staining.

General Trash

General trash such as old saw blades, cardboard, general office refuse and empty five gallon containers were observed stored in numerous empty drums located adjacent to a storage trailer. Wooden pallets were seen to be on top of and adjacent to the waste sand piles. Mr. Lindsay stated that he planned on having a rolloff brought in so that he could dispose of these wastes. The waste company that he has been and is utilizing is Blue Bonnet. The ultimate disposition of this trash was unknown.

<u>4.2</u> RCRA Status

U.S. EPA RCRA Enforcement Branch, Texas Section participated in a surveillance inspection of the facility on July 17, 1993. During the surveillance inspection, several potential violations regarding hazardous waste management activities were observed.

A & B Foundry currently does not have a U.S. EPA Identification Number. According to Mr. Lindsay, A & B Foundry does not generate hazardous waste and has not notified the U.S. EPA of any hazardous waste activity.

Final determination of RCRA status is pending receipt of analytical results for samples collected during the inspection.

5.0 SAMPLING ACTIVITIES

On August 10, 1993 samples of metal shavings, sand piles, slag/sand, and soil samples at 1 to 6 inches of the A & B Foundry facility were sampled for laboratory analysis. All sampling and analytical procedures were followed as described in the Quality Assurance Project Plan (QAPjP) for Compliance Evaluation Inspection Enforcement Sampling Program for Ten RCRA Facilities in Texas dated May 7, 1993. Copies of the chain-of-custody records for the August 10, 1993 sampling event are provided in Attachment 3.

Sampling locations were initially determined in the field on August 10, 1993 while conducting the inspection of the A & B Foundry facility. All locations were approved on-site by Mr. Bobby Williams and Ms. Michelle O'Mary of the U.S. EPA.

Quality Assurance/Quality Control (QA/QC) samples were also collected. These QA/QC samples included matrix spikes, rinsates of sampling equipment, and a blind duplicate.

All samples were analyzed for Toxicity Characteristics Leaching Procedure (TCLP) for metals, and/or Extraction Procedure Toxicity (EP-Tox) metals with the exception of the cleanup room grinding dust (sample 93ME18S02) which was analyzed for TCLP metals only.

The following table lists the sampled material, sample number, and sample matrix for each collected sample.

SAMPLED MATERIAL	SAMPLE NUMBER	SAMPLE MATRIX
Auger Sample	93ME18S01	soil/pile
Grinding Dust	93ME18S02	soil/pile
Baked Slag	93ME18S03	soil/pile
Grey Sand	93ME18S04	soil/pile (MS/MSD)
Grey Sand Silver Shavings	93ME18S05	soil/pile
HB Grinding Dust	93ME18S06	soil/bagged
Tan & Grey	93ME18S07	soil/pile
Rusted Drum	93ME18S08	soil
HBGDD	93ME18S09	soil (Duplicate of 93ME18S06)
Rinsate	93ME18R01	water

5.1 Soil Sampling

Samples were collected at each location with precleaned stainless steel trowel or spoon and placed into a precleaned stainless steel bowl for thorough mixing. The composite sample was then placed into appropriate sample containers.

The sample collected using a hand auger was collected as follows: The auger was advanced to the desired sampling depth at which point, the contents of the auger were placed onto plastic sheeting. This procedure was repeated until sufficient sample volume was collected at which point, the sample was composited as outlined above.

All collected samples were properly labeled, sealed with chain-of-custody tape and cooled to 4°C. The

All collected samples were properly labeled, sealed with chain-of-custody tape and cooled to 4°C. The samples were packed in coolers with ice, chain-of-custody paperwork, and sealed with chain-of-custody tape. Samples were shipped overnight via Federal Express to GP Environmental Services for analysis.

6.0 OBSERVATIONS

6.1 Records Inspection

Records review was conducted during the morning of August 11, 1993. A & B Foundry maintained no records with regard to waste disposal, waste determination, personnel training, preparedness and prevention, contingency plans and emergency procedures. The only documents available at the facility were Material Safety Data Sheets for the materials utilized in facility operations. Inspection derived documents are presented in Attachment 2.

6.2 Visual Inspection

The visual inspection of the site was conducted on August 10, 1993. The facility tour was provided by Mr. Bob Lindsay. Areas toured included the foundry area, the storage trailer adjacent to the foundry, paint room, waste disposal areas and all accessible property immediately surrounding the facility.

It should be noted that grinding dust and slag were identified mixed in with the used foundry sand indicating that all of the grinding dust and slag are not disposed of as indicated by Mr. Lindsay.

7.0 SUMMARY

On Tuesday August 10, 1993, an unannounced RCRA Toxicity Rule (TC)/ Compliance Evaluation Inspection (CEI) was performed by Metcalf & Eddy, Inc. (M&E) at A & B Foundry, located at 11165 Denton Drive, Dallas, Texas. Sampling was also conducted as part of the inspection. The inspection and sampling was conducted under the Technical Enforcement Support (TES X) Contract, Work Assignment R06028, for the U.S. Environmental Protection Agency (EPA), Region 6.

All portions of the TC/CEI Checklists, which were applicable to A & B Foundry, were completed during the inspection. Sections of the checklists that were not applicable to the facility are so marked. The applicability of these checklists as well as final determination of RCRA status and subsequent violations will be determined pending receipt of the analytical data.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

13 January 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED P 885 489 912

Mr. Bob Lindsay, Owner A & B Aluminum & Brass Foundry 11165 Denton Drive Dallas, Texas 75229

Re:

Request for Conference with the U.S. Environmental Protection

Agency (EPA) regarding Alleged Violations

Dear Mr. Lindsay:

EPA has received analytical results of samples collected on August 10, 1993, by EPA's authorized contractor, Metcalf & Eddy, Inc., from the waste pile located behind the A & B Foundry building. Based on these analytical results, EPA has determined that A & B Foundry manages hazardous wastes. As a result of this determination, EPA considers A & B Aluminum & Brass Foundry to be a non-notifier of hazardous waste activity and has assigned an EPA identification number, TX0000005421, for the foundry located at 11165 Denton Drive, Dallas, Texas.

EPA is hereby, requesting a meeting with you and, if you choose, your legal counsel at 10:00 a.m., Wednesday, February 2, 1994, at EPA's office located at 1445 Ross Avenue, Suite 700, Dallas, Texas, to discuss the alleged violations of the Resource Conservation and Recovery Act (RCRA), as amended. Please bring with you copies of any documents which you believe support your claim that A & B Foundry does not manage hazardous wastes.

Should you have any questions about this matter, please contact Guy Tidmore, Chief, Texas Section, RCRA Enforcement Branch at (214) 655-6794, or Terry Sykes, the attorney assigned to this case at (214) 655-2158.

Sincerely yours,

Allyn M. Davis, Director

ally mois

Hazardous Waste Management Division

cc: Wendy Rozacky, TNRCC



An Air & Water Technologies Company

September 30, 1993

Mr. Samuel Tates U.S. EPA, Region 6 RCRA Enforcement Branch 1445 Ross Avenue Dallas, TX 75202

Re:

TES X Work Assignment No. R06028 - Texas CEI/TC Inspections Validated Data For A&B Foundry

Dear Mr. Tates:

Please find enclosed two copies of Metcalf & Eddy's (M&E) Data Validation Report for A&B Foundry. Summary data tables are located in the back of the report. At your request, this report can be provided on computer disk in WordPerfect format.

Please note that all lead analyses for samples collected at facilities inspected under this work assignment are currently being reevaluated. Problems in the analytical methods used by the laboratory, GP Environmental, have been identified by M&E data validators. As a result, M&E has directed the laboratory to reanalyze samples for lead. Amended data validation reports will be submitted pending submittal of the reanalysis data from the laboratory.

Please call me if you have any questions regarding this report.

Sincerely,

Andrew B. Ellison

Contractor Project Manager

/abe

xc:

RPMO File

OD0993.34



DATA QUALITY ASSESSMENT FOR TC INSPECTIONS DATA PACKAGE

Prepared By:

Metcalf & Eddy, Inc. 2800 Corporate Exchange Drive Suite 250 Columbus, Ohio 43231

September 1993

TABLE OF CONTENTS

1.0	INTR	ODUCTION	PAGE 1
2.0	TCLP	METALS	2
	2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10	TECHNICAL HOLDING TIMES INITIAL AND CONTINUING CALIBRATION BLANKS. ICP INTERFERENCE CHECK SAMPLES LABORATORY CONTROL SAMPLES DUPLICATE SAMPLE ANALYSIS MATRIX SPIKE ANALYSIS FURNACE ATOMIC ABSORPTION QC SAMPLE RESULT VERIFICATION OVERALL ASSESSMENT	2 3 3 3 3 3
³ .0	EP-TO	DXICITY METALS	5
	3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9	TECHNICAL HOLDING TIMES INITIAL AND CONTINUING CALIBRATION BLANKS ICP INTERFERENCE CHECK SAMPLES LABORATORY CONTROL SAMPLES DUPLICATE SAMPLE ANALYSIS MATRIX SPIKE ANALYSIS SAMPLE RESULT VERIFICATION OVERALL ASSESSMENT	5 6 6 6

ATTACHMENTS

ATTACHMENT I: DEFINITIONS ATTACHMENT II: DATA TABLES

1.0 INTRODUCTION

Metcalf & Eddy, Inc. (M&E) has performed a quality assurance review of the analytical data obtained for the samples collected from the A&B Foundry facility for the TC Inspections project. Soil and water samples were submitted to GP Environmental Services (GP), Gaithersburg, Maryland for analysis of Toxicity Characteristic Leaching Procedure (TCLP) followed by analysis for the eight RCRA metàls and Extraction Procedure for Toxicity (EP TOX) followed by analyses for lead, cadmium, and chromium.

The metals were analyzed using the USEPA Contract Laboratory Program Statement of Work for Inorganic Analyses, February 1988, according to the case narrative.

The analytical data for metals in the TC inspection sample data has been reviewed and evaluated in accordance with the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, July 1988. Data Tables outlining the samples and analytical results are included in Appendix II.

2.0 TCLP METALS

Nine soil samples and one water sample were collected by M&E and submitted to GP for TCLP followed by the analysis of the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Table 1 is a listing of the samples in the sample delivery group (SDG).

TABLE 1
SAMPLES IN THE SDG

M&E Sample <u>Number</u>	Laboratory Sample Number	Date Collected
93ME18SO1	E18S01	8/10/93
93ME18SO2	E18S02	8/10/93
93ME18SO3	E18S03	8/10/93
93ME18SO4	E18S04	8/10/93
93ME18SO5	E18S05	8/10/93
93ME18SO6	E18S06	8/10/93
93ME18SO7	E18S07	8/10/93
93ME18SO8	E18S08	8/10/93
93ME18SO9	E18S09	8/10/93
93ME18RO1	E18R01	8/10/93

2.1 TECHNICAL HOLDING TIMES

All samples were analyzed within the specified holding times of 180 days for all metals other than mercury which has a holding time of 28 days. No data were qualified or rejected based on this evaluation criterion.

2.2 INITIAL AND CONTINUING CALIBRATION

Barium, cadmium, and chromium were analyzed by inductively coupled plasma emission spectroscopy (ICP). The analytical curve was established with a blank and one standard, as required. The correlation coefficents for all curves were \geq 0.995, and were therefore acceptable. The initial calibration verification (ICV) and continuing calibration verification (CCV) standards were analyzed at the recommended frequency and had acceptable recoveries of 90-110 % for all analytes. No barium, cadmium, or chromium data were qualified or rejected due to calibration evaluation.

Arsenic, lead, selenium, and silver were analyzed by graphite furnace atomic absorption (GFAA); mercury was analyzed by cold vapor atomic absorption (CVAA). The calibration curves consisted of a blank and the requisite number of standards, the lowest being at the Contract Required Detection Limit (CRDL) for each analyte. The ICV and CCV standards were analyzed at the recommended frequency and had acceptable recoveries of 90-110 % for all analytes. No arsenic, lead, mercury, selenium, or silver data were qualified or rejected due to calibration evaluation.

2.3 BLANKS

Initial calibration blanks (ICB), continuing calibration blanks (CCB), and preparation blanks (PB) results were evaluated. There was one TCLP method blank extracted and run with the samples. The following data are qualified based on blank results.

All blank results were less than the IDLs except for silver in the ICB, CCB1, CCB2, CCB3, and PB; and lead in the PB; therefore non-detected silver results were qualified as estimated (UJ) and positive results were qualified as estimated (J) and positive results for lead were qualified as estimated (J).

The following samples were affected based on the calibration blank criteria.

Sample	<u>Parameter</u>	Qualification
S01	Silver	10.9 J
S02	Silver	0.6 UJ
S03	Silver	0.6 UJ
S04	Silver	0.6 UJ
S05	Silver	0.6 UJ
S06	Silver	59 J
S07	Silver	0.6 UJ
S08	Silver	1.6 J
S09	Silver	86.7 J
R01	Silver	0.6 UJ
R01	Lead	6.5 U

The TCLP extraction blank also contained lead. However, due to the elevated dilution that was performed on the samples, the laboratory is re-analyzing them. No data evaluation has been performed with regards to the TCLP extraction blanks. This will be conducted with the new data.

No other data were qualified or rejected based on the blank criteria.

2.4 ICP INTERFERENCE CHECK SAMPLES

All ICP Interference Check Samples (ICS) results satisfied the percent recovery acceptance criteria of + 20%. No data were qualified or rejected on the basis of ICP ICS performance.

2.5 LABORATORY CONTROL SAMPLES

All LCS results for all analytes satisfied the percent recovery acceptance criterion of 80-120 %. No data were qualified or rejected on the basis of LCS results.

2.6 DUPLICATE SAMPLE ANALYSIS

The laboratory did not run a duplicate from the A&B Foundry samples. Therefore, no evaluation of duplicate results could be performed.

2.7 MATRIX SPIKE ANALYSIS

The laboratory did not run a matrix-spike from the A&B Foundry samples. Therefore, no evaluation of matrix spike results could be performed.

2.8 FURNACE ATOMIC ABSORPTION QC

Precision for all GFAA analyses was acceptable for all analytes in all of the samples. Post-digestion spike recoveries were acceptable and between 85-115 % for all analytes except selenium in seven samples and silver in four samples. Since all other duplicate injections were within the \pm 20 % relative standard deviation (RSD) acceptance criterion for analyte concentrations greater than the CRDL, no other data except the following were qualified on the basis of duplicate injection precision. The following data for selenium and silver were qualified as estimated (UJ) or (J).

<u>Sample</u>	<u>Analyte</u>
ME18S01	Selenium (UJ)
ME18S02	Selenium (UJ)
ME18S03	Selenium (UJ)
ME18S05	Selenium (UJ)
ME18S06	Selenium (J)
ME18S08	Selenium (J)
ME18S03	Silver (UJ)
ME18S04	Silver (UJ)
ME18S05	Silver (UJ)
ME18S07	Silver (UJ)

2.9 SAMPLE RESULT VERIFICATION

Sample results were correlated with the raw data and found to be correctly reported.

2.10 OVERALL ASSESSMENT

 $g^{(2)}$

The TCLP metals data for seven of the RCRA metals, the exception being lead, submitted by GP are acceptable for use with the qualifications noted above.

The CRDL standard for mercury had a high recovery of 75%. There were no samples qualified based on the CRDL for mercury.

3.0 EP TOX METALS

Eight soil samples and one water sample were collected by M&E and submitted to GP for EP TOX followed by the analysis of cadmium, chromium and lead using a modified CLP SOW as cited in Section 1.0. Table 1 is a listing of the samples in the sample delivery group (SDG).

TABLE 1
SAMPLES IN THE SDG

M&E Sample <u>Number</u>	Laboratory Sample <u>Number</u>	Date <u>Collected</u>
93ME18S01	E186S01	8/10/93
93ME18S03	E186S03	8/10/93
93ME18S04	E186S04	8/10/93
93ME18S05	E186S05	8/10/93
93ME18S06	E186S06	8/10/93
93ME18S07	E186S07	8/10/93
93ME18S08	E186S08	8/10/93
93ME18S09	E186S09	8/10/93
93ME18R01	E186R01	8/10/93

3.1 TECHNICAL HOLDING TIMES

The C-O-C records denote that sample custody was properly maintained. According to the collection date on the C-O-C, extraction date on the laboratory custody log and date of analysis on the Form I's, all samples were analyzed within the accepted holding time.

3.2 INITIAL AND CONTINUING CALIBRATION

Cadmium, lead and chromium were calibrated using the accepted number of initial calibration standards for each analysis and were within the acceptance criteria. The ICV standards and CCV standards were within the acceptance criteria.

3.3 BLANKS

- 3.3.1 Initial calibration blanks (ICB), continuing calibration blanks (CCB), and preparation blanks (PB) results were evaluated. There was one EP TOX method blank (MB) extracted and run with the samples. The ICB, CCB2, and CCB3 had detectable levels of cadmium at 0.2 ug/L; the CCB1 had detectable levels of chromium at 1.5 ug/L. Sample results were evaluated and found to be greater than 5 times the blank amounts, and greater than the IDL's, therefore no data were qualified based on blank criteria.
- 3.3.2 The extraction blank had high levels of chromium and lead. The samples with positive results for chromium are qualified as non-detected (U). The samples are being reanalyzed for lead because of the blank amount and dilution factors used. Data for lead will be evaluated when the new data is recieved.

Sample	Qualification
R01	Chromium (U)
S01	Chromium (U)
S03	Chromium (U)
S04	Chromium (U)
S05	Chromium (U)
S06	Chromium (U)
S07	Chromium (U)
S08	Chromium (U)
S09	Chromium (U)

3.4 LABORATORY CONTROL SAMPLES

All LCS results for all analytes satisfied the percent recovery acceptance criterion of 80-120 %. No data were qualified or rejected on the basis of LCS results.

3.5 DUPLICATE SAMPLE ANALYSIS

The laboratory did not perform a duplicate analysis on the samples from the A&B Foundry. Therefore, no data were evaluated or qualified based on duplicate critria.

3.6 MATRIX SPIKE ANALYSIS

The laboratory did not perform a matrix spike analysis on the samples from the A&B Foundry. Therefore, no data were evaluated or qualified based on matrix spike critria.

3.7 FURNACE ATOMIC ABSORPTION QC

All cadmium, chromium, and lead samples were analyzed by methods of standard additions. The correlation coefficient for all samples satisfied the acceptance criteria.

3.8 SAMPLE RESULT VERIFICATION

Sample results were correlated with the raw data and found to be correctly reported.

3.9 OVERALL ASSESSMENT

The EP TOX cadmium and chromium data submitted by GP are acceptable for use with the qualifications noted above. The lead data will not be fully evaluated until the new data arrives.

ATTACHMENT I DATA QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

- U The analyte was analyzed for, but not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT II DATA TABLES

A&B FOUNDRY TCLP METAL ANALYTICAL RESULTS

SAMPLE: DATE COLLECTED:		S01 8/10/93	S02 8/10/93	S03 8/10/93	S04 8/10/93	S05 8/10/93	S06 8/10/93	S07 8/10/93	R01 8/10/93
TCLP METALS (ug/L)	REG. LIMITS								
ARSENIC	5.0 MG/L	3.7 U							
BARIUM	100 MG/L	34	413	233	93.1	302	159	412	100
	1.0 MG/L	42.3	3 U	108	20.4	15.2	148	25	3.0 U
CHROMIUM	5.0 MG/L	22	71.5	15.1	8 .2 i	8.2 U	8.2 U	8.2 U	8.2 U
LEAD	5.0 MG/L	267000	2360	20900	25 0.	75300	259000	10700	6.5 J
MERCURY	0.2 MG/L	0.2 U	0.2 U	0.2 U	0.:.	0.2 U	0.2 Ü	0.2 U	0.2 U
SELENIUM	1.0 MG/L	4.3 UJ	4.3 UJ	4.3 UJ	36:	19.5 J	20.1 J	4.3 UJ	
SILVER	5.0 MG/L	10.9 J	0.6 UJ	0.6 UJ	0.6 i	0.6 UJ	59 J	0.6 UJ	4.3 UJ 0.6 UJ

Note: The (J) and (UJ) indicate estimated amounts.

A&B FOUNDRY EP TOX METAL ANALYTICAL RESULTS

SAMPLE: DATE COLLECTED:		S01 8/10/93	S03 8/10/93	S04 8/10/93	S05 8/10/93	S06 8/10/93	S07 8/10/93	S08 8/10/93	S09 8/10/93	R01 8/10/93
EP TOX METALS (ug/L)	REG. LIMITS									
CADMIUM	1.0 MG/L	228	240	83.6	66.2	220	118	93.6	280	0.20
CHROMIUM	5.0 MG/L	153 U	31.4U	20.5 Ū	65.9 U	41.1 U	21.7 Ū	53.9 U	19.6 U	21.9 U
LEAD	5.0 MG/L	42300	9960	64100	68400	140000	6430	159000	168000	16 8

NOTE: The (U) indicates that these are non-detect.

1000 CES 30 LM 3: 11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 6 DALLAS, TEXAS

IN THE MATTER OF:

A & B ALUMINUM AND BRASS FOUNDRY

\$ DOCKET NUMBER RCRA VI-505-H

DALLAS, TEXAS 75229

EPA I.D. NO. TX00000005421,

RESPONDENT.

\$ RESPONDENT.

CONSENT AGREEMENT AND CONSENT ORDER

I.

PRELIMINARY STATEMENT

- 1. On December 29, 1994, the Director of the Hazardous Waste Management Division, United States Environmental Protection Agency, Region 6 ("EPA"), filed a Complaint, Compliance Order, and Notice of Opportunity for Hearing ("Complaint") upon A & B Aluminum and Brass Foundry ("Respondent" or "Facility") pursuant to Section 3008(a) of the Solid Waste Disposal Act, as amended, 42 U.S.C. § 6901, et seq., commonly referred to as the Resource Conservation and Recovery Act ("RCRA"). The Complaint alleges that the Respondent violated Subtitle C of RCRA, 42 U.S.C. §§ 6921-6939(b).
- 2. The Respondent admits the jurisdictional allegations of the Complaint; however, the Respondent neither admits nor denies the specific factual allegations and conclusions of law contained

in the Complaint. The Complaint states a claim upon which relief can be granted.

- 3. The Respondent expressly waives its rights to request a hearing on any issue of law or fact set forth herein and waives all defenses which have been raised or could have been raised to the claims set out in the Complaint.
- 4. The Respondent consents to the issuance of this Consent Agreement and Consent Order ("CACO"), and consents to the assessment and payment of the stated civil penalty in the amount and by the method set forth in this CACO.
- 5. Compliance with the terms of the Consent Order shall resolve those matters specifically alleged in the Complaint.

II.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

- 1. A & B Aluminum and Brass Foundry ("Respondent") is incorporated in and under the laws of the State of Texas.
- 2. Respondent is a "person" as that term is defined in 31 Texas Administrative Code ("TAC") § 335.1, Section 1004(15) of RCRA, 42 U.S.C. § 6903(15), and 40 Code of Federal Regulations ("CFR") § 260.10.
- 3. Respondent owns and operates a facility (the "Facility") located at 11165 Denton Drive, Dallas, Texas, where it produces castings from molten aluminum and brass.
- 4. The Facility was in operation on or before November 19, 1980.

- 5. Respondent produces molding sand from its casting operations at the facility. This molding sand is placed on the land in the back lot of the Facility.
- 6. Respondent uses white silica sand ("Core Sand") to form molds in its casting operations at the facility. The Core Sand that is spilled onto the floor is placed on the land in the back lot of the Facility.
- 7. Respondent produces grinding dust from its casting operations at the Facility. Respondent claims this grinding dust is sold for reclamation; however, during the inspection, inspectors observed grinding dust on the ground in the back lot of the Facility.
- 8. Respondent produces metal slag from its casting operations at the Facility. Respondent claims this metal slag is sold for reclamation; however, during the inspection, inspectors observed metal slag on the ground in the back lot of the Facility.
- 9. Respondent operates two dust collection systems at the Facility. The dust collected from each of these systems is placed on the land in the back lot of the Facility.
- 10. On or about August 10, 1993, EPA representatives inspected Respondent's Facility pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927 (the "Inspection").
- 11. During the Inspection, EPA representatives observed materials described in paragraphs 5-9 (collectively "Foundry Waste") on the land in the back lot of the Facility.

- 12. The Foundry Waste placed on the land in the back lot of the Facility, identified in paragraphs 5-9, is a "solid waste" as that term is defined at 31 TAC § 335.1 and 40 CFR § 261.2.
- 13. From November 19, 1980, to September 24, 1990, 40 CFR § 261.24 provided that a solid waste having a lead concentration equal to or greater than 5.0 milligrams per liter (mg/l), when tested by the Extraction Procedure ("EP") toxicity test, was a characteristic hazardous waste.
- 14. After September 24, 1990, 40 CFR § 261.24 provides that a solid waste having a lead concentration equal to or greater than 5.0 mg/l using the Toxic Characteristic Leaching Procedure (TCLP) test, is a characteristic hazardous waste.
- 15. On or about August 10, 1993, the EPA representatives took samples of the Foundry Waste in the Facility's back lot (sample numbers S01, S03 S09).
- 16. Analyses of samples of Foundry Waste taken from the back lot using the EP Toxicity Test showed concentrations of lead greater than the toxicity characteristic limits as indicated below in Table 1.

- 18. The Foundry Waste identified in Tables 1 and 2 is a "hazardous waste", as that term is defined at 31 TAC § 335.1 and 40 CFR § 261.3.
- 19. Respondent is a "generator" as that term is defined at 31 TAC § 335.1 and 40 CFR § 260.10.
- 20. The term "disposal" is defined at 31 TAC § 335.1 and 40 CFR § 260.10 as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste so that such solid waste or hazardous waste or any constituent thereof may enter the environment of be emitted into the air or discharged into any waters, including groundwaters."
- 21. The Foundry Waste materials identified in paragraphs 11 and 16-18 were "disposed" of, as that term is defined at 31 TAC § 335.1 and 40 CFR § 260.10.
- 22. The term "landfill" is defined at 31 TAC § 335.1 and 40 CFR § 260.10 as "a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well."
- 23. The Foundry Waste identified in paragraphs 11 and 16-18 was disposed of in a "landfill", as that term is defined at 31 TAC § 335.1 and 40 CFR § 260.10.
- 24. Respondent is an owner/operator of a hazardous waste management unit as that term is defined at 31 TAC § 335.1 and 40 CFR § 260.10.

- 25. The Facility is an "existing hazardous waste management facility" as defined at 40 CFR § 260.10.
- 26. Respondent failed to file a Notification of Hazardous Waste Activity (EPA Form 8700-12) to EPA, as required by Section 3010 of RCRA, 42 U.S.C. § 6930.
- 27. Subsequently, the RCRA Enforcement Branch filed a Notification of Hazardous Waste Activity to facilitate assignment of an EPA Identification Number (TX0000005421).

COUNT I - OPERATING WITHOUT INTERIM STATUS OR A PERMIT

- 28. Section 3005(e) of RCRA, 42 U.S.C. § 6925(e), 40 CFR § 270.70, and 31 TAC §§ 335.2 and 335.43, require that any person who owns or operates a facility in existence on the effective date of statutory or regulatory amendments to RCRA that render the facility subject to the requirement to have a RCRA permit, must file a Notification of Hazardous Waste Activity, and a Part A permit application by the date that the facility becomes subject to the regulation, in order to continue treating, storing, or disposing of the hazardous wastes covered by the amendment.
- 29. From November 19, 1980, through at least August 10, 1993, Respondent disposed of hazardous wastes D008 in a landfill in the back lot of the Facility.
- 30. Respondent does not have a permit or interim status to process (treat), store or dispose of D008 hazardous waste.
- 31. Therefore, Respondent violated Section 3005(e) of RCRA, 42 U.S.C. § 6925(e), 40 CFR § 270.70, and 31 TAC §§ 335.2 and

335.43, by disposing of hazardous waste without a permit or interim status.

COUNT II - FAILURE TO OPERATE WITH A CLOSURE PLAN

- 32. Pursuant to 31 TAC §335.112(a)(6) and 40 CFR § 265, Subpart G, an owner or operator of a hazardous waste management facility must have a written closure plan identifying the steps necessary to perform partial and/or final closure of the facility.
- 33. Respondent is the owner/operator of a hazardous waste management facility managing D008 waste in a landfill in the back lot of the Facility.
- 34. As of August 10, 1993, Respondent did not have a written closure plan.
- 35. Therefore, Respondent violated 31 TAC § 335.112(a)(6) and 40 CFR § 265 Subpart G, by failing to have a written closure plan for its Facility.

COUNT III - FAILURE TO OPERATE WITH FINANCIAL ASSURANCE

- 36. Pursuant to 31 TAC § 335.112(a)(7) and 40 CFR § 265, Subpart H, an owner or operator of each facility must establish financial assurance for closure of the facility.
- 37. Respondent owns/operates a Facility as that term is defined at 31 TAC § 335.1 and 40 CFR § 260.10.
- 38. As of August 10, 1993, the Respondent did not have financial assurance.
 - 39. Therefore, the Respondent violated 31 TAC

§ 335.112(a)(7) and 40 CFR § 265 Subpart H, by failing to have financial assurance for the closure of its Facility.

COUNT IV - FAILURE TO OPERATE WITH GROUND WATER MONITORING

- 40. Pursuant to 31 TAC § 335.116 and 40 CFR § 265, Subpart F, the owner or operator of a hazardous waste landfill must implement a ground water monitoring program.
- 41. From November 19, 1980, to at least August 10, 1993, Respondent operated a hazardous waste landfill at its facility.
- 42. During the Inspection, EPA representatives observed that there was no ground water monitoring program implemented at the landfill.
- 43. Therefore, the Respondent violated 31 TAC § 335.112(a)(5) and 40 CFR § 265 Subpart F, by failing to have ground water monitoring for its landfill.

III.

COMPLIANCE ORDER

Pursuant to the Section 3008(a) of RCRA, 42 U.S.C. §
6928(a), and upon consideration of the above Findings of Fact and
Conclusions of Law, the nature, circumstances, extent and gravity
of Respondent's violations, and after consideration of the record
herein, it is ORDERED that Respondent, take the actions set out
below within the specified time frames:

- 1. Within 24 hours of receipt of this CACO, cease storing or disposing of any Foundry Waste in the landfill located in the back lot of the Facility.
- 2. Within 30 days of the effective date of this CACO, conduct a hazardous waste determination of all waste streams generated at the Facility in accordance with 40 CFR §§ 262.11(a) (b) and (c)(1).
- 3. No later than 60 days from the date of this Order, submit to EPA for comment, an interim measures work plan. The interim measures work plan shall contain a schedule for covering the landfill at Respondent's facility with a 40-mil high density polyethylene material and a schedule for the installation of a ground water monitoring system around the perimeter of the landfill.
- 4. No later than 60 days from the date of this Order, submit to EPA for comments, a closure plan for the hazardous waste landfill prepared in accordance with 31 TAC § 335.112(a)(6) and 40 CFR Part 265, Subpart G. Within 30 days of receiving EPA's comments, correct the closure plan according to EPA's comments and resubmit the corrected closure plan to EPA.
- 5. No later than 30 days from the date of receipt of EPA's approval of the corrected closure plan, submit the closure plan to TNRCC for review and approval.
- 6. In the event of EPA's or TNRCC's disapproval of any draft or final plan or submission required by this CACO, EPA and TNRCC will inform the Respondent of the deficiencies in writing.

The Respondent shall modify the plan or submission to correct the deficiencies and shall submit the modified document to EPA and TNRCC within 30 days of receipt of EPA's or TNRCC's written notice of deficiencies (unless TNRCC sets another deadline for the submittal of the modified document). In the event that the modified plan or submission is inadequate, EPA or TNRCC may disapprove the plan or submission and return it to the Respondent for correction of the deficiencies. Corrections must be made within 30 days of receipt of EPA's or TNRCC's written disapproval (unless TNRCC sets another deadline for the submittal of the modified document), or EPA and TNRCC may modify the plan or submission to correct the deficiencies. If the plan or submission is modified by EPA or TNRCC, it becomes the approved plan.

- 7. Upon approval of the Closure Plan by TNRCC, Respondent shall implement the Closure Plan in accordance with the schedule set by TNRCC. Closure of the landfill shall be completed no later than five and one half (5 1/2) years after the effective date of this Order.
- 8. Within 30 days from the effective date of this Order, Respondent shall establish a non-withdrawable escrow account for the purpose of accruing funds to pay for the closure of Respondent's landfill. The escrow account shall be established and maintained in accordance with the Escrow Agreement between Respondent and EPA which is attached hereto as Attachment 1 and incorporated by reference as if fully recited herein.

- 9. Throughout all sample collection and analysis activities required pursuant to this CACO, Respondent shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures, as set forth in EPA documents available to Respondent, which shall be incorporated into all proposed and EPA-approved plans. In addition, in connection with all sample collection and analysis activities Respondent shall:
 - a. Follow all applicable EPA guidance for sampling and analysis;
 - b. Consult with EPA in planning for, and prior to, field sampling and laboratory analysis;
 - c. Inform EPA in advance which laboratories will be used and ensure that EPA personnel and EPA-authorized representatives will have access to the laboratories and personnel used for analysis;
 - d. Ensure that all laboratories used by Respondent for analysis perform such analysis according to EPA's publication Test Methods for Evaluating Solid Wastes Physical/Chemical Methods (SW-846, 3rd Edition) or other methods deemed in writing to be satisfactory to EPA. If methods other than EPA-approved methods are to be used for analysis, Respondent shall submit those methods to EPA for written approval thirty (30) days prior to the commencement of analysis; and
 - e. Use laboratories that have been previously approved by EPA for that purpose or ensure that the laboratories to be used by Respondent participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program Respondent shall cause, upon the request of EPA, a reasonable number of known samples to be analyzed to demonstrate the quality of the analytical data.
- 10. At the request of EPA or TNRCC, the Respondent shall allow split or duplicate samples to be taken by EPA, TNRCC and/or their authorized representatives of any samples collected by the

Respondent pursuant to the implementation of this CACO.

Respondent shall notify EPA and TNRCC not less than fourteen (14)

days in advance of any sample collection activity. In addition,

EPA and TNRCC shall have the right to take any additional samples

that the agencies deem necessary.

11. In all instances in which this CACO requires written submissions to EPA, each submission must be accompanied by the following certification signed by a "responsible official":

"I certify that the information contained in or accompanying this submission is true, accurate and complete. As to those identified portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the company official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete."

For the purpose of this certification, a "responsible official" of a corporation means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar decision-making functions for the corporation.

12. In addition to the service requirements for pleadings and documents set forth at 40 CFR § 22.05, the Respondent also shall mail copies of any documentation required by this CACO to the following persons:

Two (2) copies to:

Chief
Texas Section (6EN-HT)
RCRA Enforcement Branch
Compliance Assurance and
Enforcement Division
U.S. Environmental Protection Agency

1445 Ross Avenue, Suite 700 Dallas, Texas 75202-2733

One (1) copy to:

Manager,
Enforcement Section
Industrial & Hazardous Waste Division
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

IV.

CIVIL PENALTY

- 1. Pursuant to the authority of Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), and upon the consideration of the nature, circumstances, extent and gravity of Respondent's violations, the evaluation of documentation concerning Respondent's ability to pay, Respondent's good faith efforts to comply, history of noncompliance or lack thereof, the degree of wilfulness and/or negligence, Respondent is hereby assessed a civil penalty of EIGHT HUNDRED NINETEEN THOUSAND, SIX HUNDRED FORTY-ONE DOLLARS (\$819,641).
- 2. Upon evaluation of documentation concerning Respondent's ability to pay the assessed civil penalty and Respondent's agreement to undertake the actions set forth in Section III, Compliance Order above, it is hereby AGREED that upon Respondent's satisfactory completion of the actions set forth in this CACO, EPA will waive the civil penalty proposed in the Complaint and assessed above.

3. Should Respondent fail to satisfactorily complete the actions set forth in this CACO, Respondent shall pay stipulated penalties as set out in Section V of this CACO.

٧.

STIPULATED PENALTIES

- 1. In addition to any other remedies or sanctions available to the United States, if Respondent fails or refuses to comply with any term or condition of the CACO, it shall pay stipulated penalties of \$500 per day, from day one through day sixty (60), for each such failure or refusal. Penalties shall accrue from the date of noncompliance specified in a demand letter until the violation is corrected as determined by EPA.
- 2. If Respondent fails to comply with any term or condition of the CACO for more than 60 days from the date of noncompliance specified in the demand letter, Respondent shall pay stipulated penalties of \$819,641.00.
- 3. The payment of stipulated penalties shall be made by mailing a money order, cashier's check, or certified check payable to Treasurer of the United States, within (30) days of receipt of a demand letter for payment to the following address:

Regional Hearing Clerk (6C) U.S. EPA, Region 6 P.O. Box 360582M Pittsburgh, PA 15251

Docket No. RCRA VI-505-H should be clearly typed on the check to ensure credit. Respondent shall send simultaneous notices of

such payments, including copies of the money order, cashier's check or certified check to the following:

- (1) Chief, Texas Section (6EN-HT)
 RCRA Enforcement Branch
 Compliance Assurance and
 Enforcement Division
 U.S. EPA, Region 6
 1445 Ross Avenue
 Dallas, Texas 75202-2733
- (2) Chief, Legal Branch (6EN-L)
 Compliance Assurance and
 Enforcement Division
 U.S. EPA, Region 6
 1445 Ross Avenue
 Dallas, Texas 75202-2733
- (3) Regional Hearing Clerk (6C)
 U.S. Environmental Protection Agency
 Region 6
 1445 Ross Avenue
 Dallas, Texas 75202-2733

Adherence to these procedures will ensure proper credit when payments are received.

- 4. In addition to the stipulated penalties set forth in Paragraphs 1 and 2 of this section, the EPA and the United States specifically reserve the right to seek other remedies or sanctions available to the EPA or the United States by reason of Respondent's failure to comply with the terms and conditions of this CACO, including sanctions that the EPA or the United States may seek under Section 3008 of RCRA.
- 5. If Respondent disputes the basis for imposition of stipulated penalties, the issue shall be resolved under the Dispute Resolution procedures of this CACO. Invoking Dispute Resolution shall not stay the accrual of stipulated penalties;

however, the obligation to pay shall be stayed pending resolution of the dispute.

VI.

FORCE MAJEURE

- 1. Respondent shall perform the requirements of this CACO within the time limits set forth or approved or established herein, unless the performance is prevented or delayed solely by events which constitute a force majeure. A force majeure is an event arising from causes which are not foreseeable, which are totally beyond the control of Respondent, including its consultants and contractors, which could not be overcome by the exercise of due diligence, and which delays or prevents the performance by a date or time required by this CACO. Such events do not include unanticipated or increased costs of performance, changes in economic circumstances of Respondent, or normal precipitation events.
- 2. Respondent must notify EPA in writing within seven (7) days of an event which constitutes a <u>force majeure</u>. Such notice shall identify the event causing the delay or anticipated delay and include an estimate of the anticipated length of delay, a description of measures taken or to be taken to minimize the delay, and a time table for implementation of measures to be taken to minimize the delay. Respondent shall adopt all measures to avoid and minimize the delay. Failure to comply with the

notice provision of this section shall be construed as a waiver of any claim of $\underline{\text{force}}$ $\underline{\text{majeure}}$ by the Respondent.

3. If EPA determines that the delay has been or will be caused solely by events which were not foreseeable, which were totally beyond the control of Respondent, including its consultants and contractors, and which could not have been overcome by due diligence, the time for performance for that part of this CACO shall be extended by EPA for a period equal to the delay resulting from such circumstances. The modification of the time periods allowed for performance of the applicable element(s) of this CACO shall be accomplished through written notification by the EPA to Respondent. Such an extension due to force majeure does not alter the time period allowed for performance or completion of other tasks required by this CACO. In the event that EPA and Respondent cannot agree that a delay or failure has been or will be caused solely by events which were not foreseeable, which were totally beyond the control of Respondent, including its consultants or contractors, or if EPA and Respondent cannot agree on the length of an extension, the dispute shall be resolved in accordance with the Dispute Resolution provisions of this CACO.

VII.

DISPUTE RESOLUTION

1. If the Respondent objects to any decision or directive of EPA, the Respondent shall notify the Chief of the RCRA

Enforcement Branch, Region 6 ("the Chief"), in writing of its objections and the basis for those objections within fifteen (15) calendar days of receipt of EPA's decision or directive. Chief, or his designee, and the Respondent shall then have an additional fifteen (15) calendar days from EPA's receipt of Respondent's written objections to attempt to resolve the dispute. If an agreement is reached between the Branch Chief and the Respondent, the agreement shall be reduced to writing and signed by the Branch Chief and the Respondent and incorporated by reference into this CACO. If no agreement is reached between the Chief, or his designee, and the Respondent within that time period, the dispute shall be submitted to the Deputy Director of the Compliance Assurance and Enforcement Division or his designee (Deputy Division Director). The Deputy Division Director and the Respondent shall then have a second 15-day period to resolve the dispute. If an agreement is reached between the Deputy Division Director and the Respondent, the resolution shall be reduced to writing and signed by the Deputy Division Director and Respondent and incorporated by reference into this CACO. If the Deputy Division Director and the Respondent are unable to reach agreement within this second 15-day period, the Deputy Division Director shall provide a written statement of EPA's decision to the Respondent, which shall be binding and incorporated by reference into this CACO.

VIII.

RECORD PRESERVATION

- 1. The Respondent shall preserve all records and documents in its possession or in the possession of its divisions, employees, agents, contractors, or successors which in any way relate to this CACO, regardless of any document retention policy to the contrary for a minimum of five years following Respondent's receipt of EPA's written notification that this CACO has been satisfied and terminated.
- 2. Respondent shall notify EPA ninety (90) calendar days prior to the destruction of any documents or records required to be kept under his CACO. Upon request by EPA, Respondent shall make available to EPA the actual records, or copies of the actual records, required to be maintained pursuant to this CACO.

IX.

TERMINATION

1. At such time as the Respondent believes that it has complied with all terms and conditions of this CACO, including any agreed modification, it may request that EPA advise whether the requirements of this CACO, excepting Section VII (Record Preservation) have been satisfied. Such request shall be in writing and shall provide the necessary documentation to establish whether there has been full compliance with the terms and conditions of this CACO. EPA will respond to said request as expeditiously as possible. Except for Section VIII (Record Preservation) requirements of this CACO, this CACO shall

terminate when all actions required to be taken by this CACO have been completed, and the Respondent has been notified by the EPA in writing that this CACO has been satisfied and terminated.

X.

RETENTION OF ENFORCEMENT RIGHTS

- 1. EPA does not waive any rights or remedies available to the United States or EPA for any violations by the Respondent of Federal or State laws, regulations, or permitting conditions following the entry of this CACO.
- 2. Notwithstanding any other provision of the CACO, an enforcement action may be brought against the Respondent pursuant to Section 7003 of RCRA, 42 U.S.C. § 6973, or other statutory authority if EPA finds that the handling, storage, treatment, transportation, or disposal of solid waste or hazardous waste at the facility presents an imminent and substantial endangerment to human health or the environment.

XI.

INDEMNIFICATION OF EPA

1. Neither EPA nor the United States Government shall be liable for any injuries or damages to person or property resulting from acts or omissions of the Respondent, its officers, directors, employees, agents, receivers, trustees, successors, assigns, or contractors in carrying out activities pursuant to this CACO, nor shall EPA or the United States Government be held out as a party to any contract entered into by

the Respondent in carrying out the activities required by this CACO.

XII.

PARTIES BOUND

- 1. The provisions of this CACO shall apply to and be binding upon the parties to this action, their officers, directors, agents, servants, employees, attorneys, successors, assigns, and all persons, firms, entities and corporations in active concert and participation with them who receive actual notice of this CACO by personal service or otherwise. The undersigned representative of each party to this CACO certifies that he or she is fully authorized by the party whom he or she represents to enter into the terms and conditions of this CACO and to execute and to legally bind that party to it.
- 2. No change in ownership, corporate, or partnership status relating to the Facility will in any way alter the status or responsibility of Respondent under this CACO. Any conveyance of title, easement, or other interest in Respondent's Facility or a portion of Respondent's Facility shall not affect Respondent's obligations under this CACO. Respondent shall be responsible for and liable for any failure to carry out all activities required of Respondent by this CACO, irrespective of its use of employees, agents, contractors, or consultants to perform any such tasks.
- 3. Respondent shall provide a copy of this CACO to all contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed

pursuant to this CACO, and shall condition all such contracts on compliance with the terms of this CACO.

4. Any documents transferring ownership and/or operations of the Facility from Respondent to a successor-in-interest, shall include written notice of this CACO; however, Respondent, shall, no less than thirty (30) days prior to transfer of ownership or operation of the Facility, provide written notice of this CACO to its successor-in-interest, and written notice of said transfer of ownership and/or operation to EPA and the TNRCC.

XII.

NOTIFICATION

1. Unless otherwise specified elsewhere in this CACO, whenever notice is required to be given, a report or other document is required to be forwarded by one party to the other, or a submission or demonstration is required to be made, it shall be directed to the individuals specified below at the addresses given (in addition to any action specified by law or regulation), unless these individuals or their successors give notice in writing to the other parties that another individual has been designated to receive the communication:

For EPA:

Chief, Texas Section (6EN-HT)
RCRA Enforcement Branch
Compliance Assurance and
Enforcement Division
U.S. EPA - Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

For Respondent:

Bobby Lee Lindsay

A & B Aluminum and Brass Foundry 11165 Denton Drive Dallas, Texas 75229

XIII.

BECTION HEADINGS

1. The section headings set forth in this CACO are included for convenience of reference only and shall be disregarded in the construction and interpretation of any provisions of this CACO.

XIV.

MODIFICATION

1. The terms, conditions, and compliance requirements of this CACO may not be modified or amended except as otherwise specified in this CACO or upon the written agreement of both parties and such modification or amendment being filed with the Regional Hearing Clerk.

XV.

COSTS

1. Each party shall bear its own costs and attorneys fees.

XVI.

EFFECTIVE DATE

1. This CONSENT AGREEMENT AND CONSENT ORDER shall become effective upon filing with the Regional Hearing Clerk.

AGREED:

RESPONDENT:

Date: 9-5-96

A & B Aluminum and Brass Foundry, Inc.
Respondent

COMPLAINANT:

Date: 9/27/96

Allyn M. Davis, Director Multi-Media Planning and Permitting Division

EPA - Region 6

This CONSENT AGREEMENT AND CONSENT ORDER is hereby adopted and issued pursuant to the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq., as amended by the Hazardous and Solid Waste Amendments of 1984, Public Law No. 98-616, 98 Stat. 3221 (1984), and the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, 40 C.F.R. Part 22, and shall become effective upon filing with the Regional Hearing Clerk.

IT IS SO AGREED AND ORDERED:

Date: 9/30/94

Jame N./Saginaw // Regiona/ Administrator (6A) CERTIFICATE OF SERVICE

I hereby certify that on the 30° day of 1996, the original of the foregoing Consent Agreement and Consent Order was hand delivered to the Regional Hearing Clerk, U.S. Environmental Protection Agency, Region 6, 1445 Ross Avenue, First Interstate Bank Tower, Dallas, Texas 75202-2733, and that a true and correct copy was placed in the United States Mail, postage prepaid addressed, to the following:

CERTIFIED MAIL - RETURN RECEIPT REQUESTED P887 155 287

A & B Aluminum and Brass Foundry 11165 Denton Drive Dallas, Texas 77229

APPENDIX B WASTE STREAM CHARACTERIZATION DOCUMENTATION





February 15, 1995

Mr. Steve Wilson Haynes & Boone 3100 Nationsbank Plaza Dallas, Texas 75202-3789

Re: A & B Foundry

11165 Denton Drive, Dallas, Texas

Mr. Wilson:

Enclosed are copies of a site layout map, a process diagram, and a material inventory list for your review. These diagrams have also been forwarded to Sabrina Lindsay of A & B Foundry. Considering all the factors which we discussed, the following action items are suggestions for A & B Foundry to consider prior to any sampling activities:

- The grouping of activities and processes is essential in the separating of waste streams. The activities in the process line should have a recognizable flow.
 - Move the core sand mixing unit and its associated chemicals into the core room.
 - Group and consolidate chemicals into specified areas. The chemicals should be kept in designated storage areas in case of a spill or fire. The grouping of processes may assist in the grouping of the chemicals.
 - Relocate raw materials and rework materials near the furnace will they will be used.
 - Control and consolidate green molding sand piles to limit tracking and wasting of materials. Several 2" x 12" boards can be notched to form a "sand box" type container as temporary inexpensive solution. This type of containment area can also be lined with plastic drop cloth type material to better control the sand, but I realize this may not be feasible for your application. Small trash roll-around type containers similar to those used in the mining industry are also available. The cement industry uses concrete or brick horse stall type dividers to bank up and control material stockpiles.

214/580-1323 FAX: 214/550-7464 METRO: 214/751-0057

- ▶ Keep silica core sand separated from green sand to avoid contamination.
- Group types of sand once it is spent.
- Organize all materials and keep better housekeeping practices.
- In the future, A & B might consider purchasing another drill press for metal materials. This would keep the pattern shop to strictly wood working processes where the only lead control required would be upon entry into the pattern shop
- Try not to have any chemicals on hand that are not currently used.
- Make sure all containers are labeled in accordance with their actual contents. Know what is in each drum.
- Monitor what is placed in the municipal trash containers.
- Group all wastes that have already been generated so we can accurately assess the situation. Try not to scatter drums of core sand, etc.
- Evaluate the antique black process. Is there another way to perform this process with eless harmful chemicals? Can less water be used to rinse the plates? Can spent water be filtered and reused?
- To provide additional room to organize activities, identify all unused and broken equipment that could be re-sold or scrapped to a metals recycling facility.
- Tour another foundry to see how they handle their waste streams

If you have any questions concerning this matter, please contact me at (214) 580-1323.

Respectfully submitted,

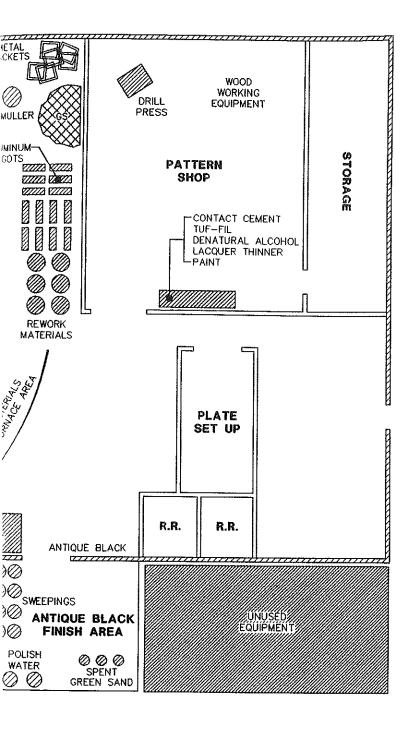
Jennifer L. Hull

Environmental Manager

cc: Sabrina Lindsay, A & B Foundry

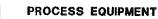
/ LAYOUT





LEGEND



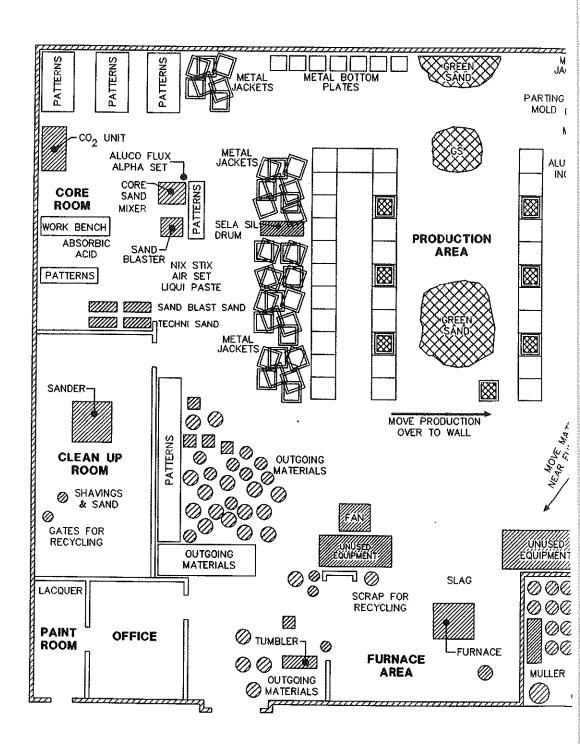


MATERIALS

PROCESS MATERIALS

A & B Foundry

FACILITY



SOUTH CONTRACT OF

THE STREET, ST

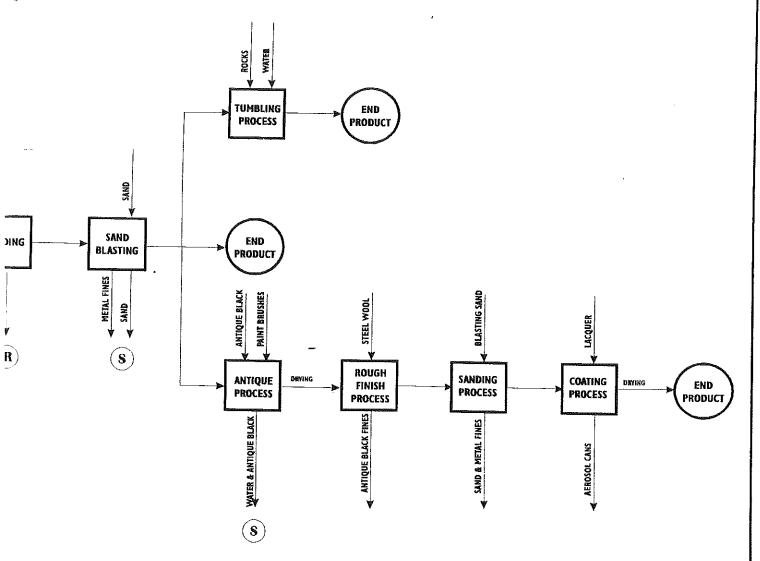
Sections disease

Noed Character

COLOREGUE

!

& B FOUNDRY ICESS DIAGRAM



CHEMICAL LIST-A 5 B ALUMINUM 5 BRASS FOUNDRY INC. 30B: 1715 26 Jan 1995

S1#_	MANUFACTUER	PRODUCT NAME	AVGVL_HA	XVL	AVGWT	TWXAN	SEQ4	CHENICAL NAME.	WGT	CAS#	_P#	s.L.	-13
		ANTIQUE BLACK M24	5	12	47	113	6	WATER	76,10	7732-18-5		х х -	
	BIRCHWOOD LABORATORIES, INC. BIRCHWOOD LABORATORIES, INC.	ANTIQUE BLACK H24	5 -	12	47-	119-							
	I. SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED				3,000	4	2180	S,ØØ	7444-66-6	<u> </u>	X	
	1. SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED				3,000	5	NICKEL	ø.8¢	7449-82-6	М	X	
	т - еснинани с сонрану	Brasses —Red-Brasses-Amd-Semi—Red			-1,2 0 0.	- 3 , 000 -			 5.00	-7439 92 1	-H-	¥	
	I. SCHUMANN & COMPANY	BRASSES RED BRASSES AND SEMI-RED			1,200	3,000	2	ит	5,00	7440-31-5	H	X	
	I, SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED			1,200	3,000	6	ANTIHONY	Ø.25	1369-64-4	M	X	
	I SCHUMANN & COMPANY	BRASSES RED BRASSES AND SENT-RED			1,266	- 3,000	1-	COPPER	05.88	7440 50 0	- H -	* —	
	I. SCHUMANN & COMPANY	BRASSES RED BRASSES AND SEMI-RED BRASSES			1,200	3,000					<u> </u>	X	
,	I. SCHUMARN & COMPANY	YELLOW BRASSES				3,500		COPPER	77 . 0.0	- 7 440 50 0 ~~	M M		
	1. SCHUMANN & COMPANY	TELLOW BRASSES						5 240	,		М		
	I, SCHUMANN & COMPANY	YELLOW BRASSES				3,500		LEAD TIN		7449-31-5			
	I, SCHUMANN & COMPANY	YELLOW BRASSES			1,700	3,500		ZINC		7440 66 6			
	1. SCHUMANN-G-COMPANY	- AETTOM BRYSSES			_1,700	3,500	<u> </u>	HICKEL		7446-62-6			
	1. SCHUHANN & COMPANY	YELLOW BRASSES			•	•				-14808 60 7-			
3	-U.S. SILICA COMPANY	CRYSTALLINE SILICA			- 2,000	-4-444	-1 -	- STRAU			M		
	U.S. SILICA COMPANY	CRYSTALLINE SILICA			2,000	4 666					и	^ .	
4	BORDEN	NIX STIX-18			21-			MUSCOVITE	20 00	1318-94-1	M	X	!
	BORDEN BORDEN	HIX STIX 18 NIX STIX 18	3 3	6 6	21	41	3 4	LIGHT ALIPHATIC SOLVENT	• •	64742-89-8		X	
	DORPER							RAPHTHA	/.G. G.d	1 110-54-3	н	X	
	BORDEN	NIX STIX 18	3	6			2	HEXANE PROPYLENE CARBONATE		1 108-32-7	н	X	
	BURDEH	NIX STIX 18	3	- -	21	41	1	PROPILEME CAMBONALE	3.00				
_	DOSDELL .	HOLD KOTE 5	36	50	235	392		- -			M	X	
5	Borden Borden	HOLD KOTE 5	307	50	235	392	1	TOLUENE	60.00	7 1 08 88 3	Н	<u> </u>	
		ATTIONER IN VB			50	125	6	QUARTZ		3 148 6 8-6 8 -7		X	
6	BORDEN	ALUCOFLUX YB ALUCOFLUX YB			50			TALC		14807-96-6		X	
	BORDEN	ALICOPLUX YB			5.0			AMORPHOUS SILICA		7 62676 86 0			
	BORDEN	ALUCOFLUX YB			56			CALCIUM FLUORIDE		3 77 89-75-5		X	
		ALUCOFLUX YB			59			HEMATITE		8 1317 -68-8 8 1383-96-4		_X	
				_	<u>5@</u>			BORAX DECAHYDRATE CALCIUM CARBONATE		- 1303 - 13 - 1 8 471-34-1		X	
	BORDEN	ALUCOFLUX_YB				175	1	CALCION SAMBURAIS	7.04	2 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2		x	
	BORDEN BORDEN	ALUCOFLUX YB			54						М		
	BORDEN				5 6 5 6	125							
17	BORDEN BORDEN	ALUCOFLUX YB ALUCOFLUX YB NOL SIL PARTING - RELEASE		<u></u> 		125	1	CALCIUM CARBONATE	78,19	8 471-34-1	н	х	
17	BORDEN BORDEN BORDEN BORDEN	ALUCOFLUX YB ALUCOFLUX YB NOL SIL PARTING - RELEASE DOWNER FOR MOLDING		 	50	125 45 6	1	CALCIUM CARBONATE	79,16	ð 471–34-1	н	х	
17	BORDEN BORDEN BORDEN	ALUCOFLUX YB ALUCOFLUX YB NOL SIL PARTING - RELEASE POWDER FOR MOLDING NOL SIL PARTING - RELEASE		 	50 200	125 45 6	1	CALCIUM CARBONATE			H	- x -	
17	BORDEN BORDEN BORDEN BORDEN	ALUCOFLUX YB ALUCOFLUX YB NOL SIL PARTING - RELEASE POWDER FOR MOLDING NOL SIL PARTING - RELEASE NOL SIL PARTING - RELEASE		 	50 200	125 45 <i>0</i> 4 5 <i>0</i>	1	CALCIUM CARBONATE QUARTZ		\$ 471-34-1 5 148 0 8-6 0 -7	H	- x -	
17	BORDEN BORDEN BORDEN BORDEN	ALUCOFLUX YB ALUCOFLUX YB NOL SIL PARTING - RELEASE POWDER FOR MOLDING NOL SIL PARTING - RELEASE POWDER FOR MOLDING		 	58 288 288 288	125 458 458 458	1		Ø.55		H	х х	×

CHEMICAL LIST-A 5 B ALUMINUM 5 BRASS FOUNDRY INC. JOB: 1715 26 Jan 1995

SI#	MANUFACTUER	PRODUCT NAME	AVGVL .MA	XVLAVG	M	AXWI	SEQ#	CHEMICAL SAME	WGT	CASA	PH.	S.L.G.
		PHOSPHOR COPPER			36	68	1	COPPER	85,00	7448-58-8	H	
	- сенимани с со-	PHOSPHOR COPPER-			3 ₽	- 50 -		PHOSPHORUS	15.44	7723-14-9	.H ₩	
	I, SCHUMARN & CO.	PHOSPHOR COPPER			26	ù.	2					
	1. SCHUMANN 5 CO.	HIGH-LEARED TIN-BRONZES		1 ,	, 444 —	1,500	-5	NICKEL		744 0-0 2-0 7440- 5 0 -8	.н. М	
	I, SCHUMANN & CO.	HIGH LEADED TIN BRONZES		1,	, 989	1,598	1	COPPER				
		HIGH LEADED TIN BRONZES				1,500		TIH			М	-
	COMMANN E CO	HIGH-LEADED TIN BRONZES				1,500		ZINC				
	I. SCHUMANN & CO.	HIGH LEADED TIN BROKZES				1,500	3	LEAD	7,640	7439-92-1	H	
		HIGH LEADED TIN BRONZES				1,566	_	ANTIMONY	41.25	1300-64-4-	 -H	
	1. SCHUMANN & CO.	HIGH-LEADED - TIM-BRONSES		<u></u>	- 10KK	1,500-	- (>					
		GOLD SEAL		38.	.000 5	4,000					М	х
		COLD SEAL				4,000	1	EILICON DIOXIDE		7631-86-9	- H -	
	Madella and an	GOLD SEAL		30	, aga 5	4,000	2	ALUMINUM OXIDE	47,59	1344-28-1	М	X
	BORDEN	ALPHACURE 526		64	1 0	578-						X
	BORDEN	ALPHACURE 926	2	68	19	578	1	NOT LISTED		\$ \$5 - \$899 999	Ħ	×
					15						_ H	-X
		AIR SET 913			15	36	1	HEPTANE	95.50	142-82-5	М	X
	THE HILL & GRIFFITH CO.	AIR SET 913			15	36		ALUHINUM METAL		7429-96-5	H	x
	THE HILL & GRIFFITH CO.	AIR SET 913			15	3#		HEXANE		110-54-3	- H	X
	THE HILL & GRIFFITH CO.	AIR SET 913			15	36	-	METHYLCYCLOPENTANE	2.50	95-37-7	H	X
	THE HILL & GRIFFITH CO.	AIR SET 913			15	36		CYCLOHEXANE	2.50	116-82-7	H	Х
	THE HILL & GRIFFITH CO.	AIR SET 913			15	30-		BENZENE		71-43-2	- M -	¥
	THE HILL & GRIFFITH CO.	AIR SET 913			15	30	7	TOLUENE	2,59	198-88-3	Ħ	K
					can	1,000					_ H_	¥
	TECHNI SAND	RESIN COATED SAND - ALL				- F. L. S. H. C.						
	TECHNI SAND	GRADES RESIN COATED SAND - ALL			500	1,000	1	NOYOLAC RESIN	3.50	9003-35-4	М	X
	TECHNISAND	GRADES			500	1,000	5	QUARTZ	74,80	14808-60-7	М	X
	1 ECHRI SARI	GRADES						Those AVIGES	17. 00	J_1300-37-1	_14_	. v
	TECHKISAND	RESIN COATED SAND - ALL			500	1,444	-3	TRON OXIDES	14+1/4	3—4 @4@4+ 1		
	_	GRADES			500	1 000		HYDRATED ALUMINUM SILICATE	4.90	1332-58-7	М	x
	TECHNISAND	RESIN COATED SAND - ALL GRADES			- DAR	1,000		MIDRALED ADOMINON STEEONIC				
	TECHNI SAND	RESIN COATED SAND - ALL			500	1,000	2	HEXAMETHYLENETETRAMINE	1,90	100-97-0	М	X
		GRADES										
	Aparaa tua	SOLOSIL 131			566	788	1	WATER	59.96	7732-18-5	н	X
	FOSECO, INC.	SOLOSIL 131			599	766	2	SODIUM SALT OF SILICIC ACID	46,10	1344-89-8	M	X
	POSECO, INC.	SOLOSIL 131			500 -			14.44			<u> </u>	- X
								at the autom	466 61	1 25007 47 F	r	v
	POTTERS INDUSTRIES, INC.	BALLOTINI IMPACT BEADS				1 666		GLASS OXIDE	TAN, W	65997-17-3	L L	A.
	POTTERS INDUSTRIES, INC.	BALLOTINI IMPACT BEADS			- 5 44 -	-1-000						A
					125	251	1	CARBON DIOXIDE	100.00	8 124-3 8-9	p	x
	AIR PRODUCTS	CARBON DIOXIDE			125	251 251		The state of the s		·	p	×
	AIR PRODUCTS	- And Source to a state of the							<u>.</u> -			.,
ø	BIRCHWOOD LABORATORIES, INC.	ANTIQUE BLACK M24	5	12	47	113		SELENIOUS ACID	-	3 7783 -80 8	<u>명</u> 보.	X
	BIRCHWOOD LABORATORIES, INC.	ANTIQUE BLACK N24	5	_12	47_	113		ANHONIUM HOLVER	-) 13186-76-8 } 77 58 -98 -7	- 44 -	X
	RIPCHWOOD LABORATORIES. INC.	ANTIQUE BLACK H24	5	12	47	113		CUPRIC SULFATE	-	8 775 8-98 -7 8 7664-38-2	M	X
	BIRCHWOOD LABORATORIES, INC.	ANTIQUE BLACK M24	5	12	47	113 113	3	PHOSPHORIC ACID		1 7733-02-0	<u>M</u>	<u> </u>
	BIRCHWOOD LABORATORIES, INC.	ANTIQUE BLACK M24		12		113						

A CARROLL AND A SECOND

,	MANUFACTUER	PRODUCT SAME	AVGVI.	MAXVE	AVGWT	MAXWIL	SEQ≠.	CHEMICAL NAME	* LAS*	Р Н ——	S L	
 J	I, SCHUMANN & CO.	PHOSPHOR COPPER			30	-	1	COPPER	85,00 744 0 -50-8	4	X V.	
	I, SCHUMARR & CO. I, SCHUMARR & CO.	PHOSPHOR COPPER PHOSPHOR COPPER			3 4 -		2	рноѕрновов	15,99 7723-14-9	Я		
•						0.721.1	5	NICKEL		¾	እ -	
	E. SCHUMANN N CO	HIGH LEADED IIN BRONZES					1	COPPER		Н	X	
1	I, SCHUMARN & CO.	HIGH LEADED TIN BRONZES					2	TIK	7,00 7440-31-5	ч	x	
	I. SCHUMANN 5 CO.	HIGH LEADED TIN BRONZES				-,	. 4					-
	I- SCHUMANN A CO.	HIGH LEADED TIN BRONZES				1,500	3	LEAD	7,00 7439-92-1	મ્	X	
	I. SCHUMANN & CO.	HIGH LEADED TIN BROKZES HIGH LEADED TIN BROKZES				1,500				ч	X	
	I, SCHUMANN & CO.	HIGH LEADED TIN PRONZES			1,400	1,500	- 6			н.	¥	
• .	1—SCHUMANN & CO,	-HENR-CEMPER TER THORSES			-,	·						
,	THE MORIE COMPANY, INC.	GOLD SEAL			39,998	54,000				М		
	THE HORIE COMPANY, INC.				30,000	54,000	1		- F2 , FR - 7631 - A6 - D			
	THE MORIE COMPANY, INC.	GOLD SEAL			30,000	54,000	7	ALUMINUM OXIDE	47,59 1344-28-1	4	X	
	BORDEN	ALPHACURE 920		ž64					gaaga ga a	H -	.) }	X
	BURDEN	ALPHACURE 92#	2	8 69	19	578	1	NOT LISTED	Mankham man	m	,	
	THE HILL & GRIFFITH-CO.	_AIR SET 913		_	- 15					. u	- X	
	THE HILL & GRIFFITH CO.	AIR SET 913			15	34	1	HEPTANE	95,5 0 142-03-5		X	
	THE HILL & GRIFFITH CO.	AIR SET 913			15	30	.5	ALUMINUM METAL	7,50 7429-90-5		X	
	THE HILL & GRIFFITH CO.				15-			HEXAPE	2,88 118 54 3	₩		
	THE HILL & GRIFFITH CO.	AIR SET 913			15		4	METHYLCYCLOPENTAME	2.50 96-37-7		X	
	THE HILL & GRIFFITH CO.	AIR SET 913			15			CYCLOHEXANE	2.50 110-82-7		Х	
	THE HILL & GRIFFITH CO.	AIR SET 913		_	-15	• -	-		—— (5-71-43-2 ··-		- X	
	THE HILL & GRIFFITH CO.	AIR SET 913			15	30	7	TOLUENE	2,50 100-00-3	ч	X	
	TECHNI SAND	RESIN COATED SAND - ALL			500	- 1,000				H	K .—	"
		GRADES					_	volet of perty	3,50 9003-35-4	u	x	
	TECHN1SAND	RESIN COATED SAND - ALL			500	1,000	1	NOVOLAC RESIN	3,50 9003-35-4	71	`	
	and the second s	GRADES					-	OUARTZ	74 at 14adb-64-7	ч	V	
	TECHN1SAND	RESIN COATED SAND - ALL			5 ଖ ଡ଼	1,000	•	र्वालका (६	7-1100 1-00000		•	
		GRADES			5.84	1 444	5	IRON ONTHES	14_98_1389_37_1	ч	χ	
	TECHNISAND	RESIN COATED SAND - ALL GRADES			• • •							
	TECHNISAND	RESIN COATED SAND - ALL GRADES			500	1,000		HYDRATED ALUMINUM SILICATE	4.90 1332-58-7	M 	X	
	TECHNISAND	RESIN COATED SAND - ALL			୨ ୫୫	1,444	2	HEXAMETHYLENETETRAMINE	1,50 100-97-0	М	K	
		GRADES										
	Dogge Line	SOLOS11, 131			560	788	1	WATER	59.90 7732-18-5	Н	X	
	FOSECO, INC.	SOLOSIL 131			500	700	2	SODIUM SALT OF SILICIC ACID	40,10 1344-09-8	М	Х	
	FOSECO, INC.	SOLOSIL 131 -	_		500	740				14	¥	
	rusew, inc.											
	POTTERS INDUSTRIES, INC.	BALLOTINI IMPACT BEADS			500	1,000	i	GLASS OXIDE	100,00 65997-17-3	P	X	
	POTTERS INDUSTRIES, INC.	BALLOTINI IMPACT BEADS			566	1,444				1 -	X	
					125	251	1	CARBON DIOXIDE	100,00 124-38-9	þ		х
	AIR PRODUCTS	CARBON DIOXIDE			125							×
-	AIR PRODUCTS								4 BBNA 17 C	٠,		
	BIRCHWOOD LABORATORIES, INC.	ANTIQUE BLACK M24		5 12				SELENIOUS ACID	2,90 7783-00-8	4		X
	BIRCHWOOD LABORATORIES, INC.	AKTIQUE BLACK H24		5 17				AHMONIUM MOLVEDATE		H		X
	BIRCHWOOD LARGRATORIES, INC.	ANTIQUE BLACK M24		5 17				CUPRIC SULFATE	3,9 8 7758-98-7 7,98 7664-38-2	∺ H		X
	DIDCHWOOD LABOUATORIES INC.	ANTIQUE BLACK M24		5 13			-	PHOSPHORIC ACID	4_9#_7733_#2_#	M		X
	BIRCHWOOD LABORATORIES, INC.	AUCTOUR BLACK MOA		5 17	2 . 47	_ 113	_ 4			•••		

HEMICAL LIST--A A B ALUMINUM & BRASS FOUNDRY INC. -OB: 1715 26 Jan 1995

								CHEMICAL SAME			_	
	ATECHWOOD LABORATORIES, INC.	ANTIQUE BLACK M24	5	12 12	47 47	113		WATER	76.10 7732-18-5			x *
	IRCHWOOD LABORATORIES, INC.	RED BRASSES AND SEMI-RED			1,204	3,000	4	ZINC	5.00 7440-66-6	м	Ж	
	. SCHUMANN & COMPANY	BRASSES			1.200	3,000	5	NICKET	Ø,8Ø 744Ø-Ø2-Ø	н	x	•
	I, SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED BRASSES				•		EAB	5,00-7430-52- 1-	— н-	- 1 (-	
	L, SCHUMANN & COMPANY	BRASSES						TIN	5.00 7440-31-5	М	х	
	I. SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED BRASSES				3,000		ANTIHONY	0.25 13 09 54 4	м	×	
	I. SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED BRASSES				3,000		COPPER	85.00 7440 50 B			
_	I - SCHUMANN & CYMPANY	RED BRASSES AND SEMI RED PRASSES			1,200	- 3,000 -			00,00 7440 50 5		X	
	I. SCHUMANN & COMPANY	RED BRASSES AND SEMI-RED BRASSES	.,		1,200	3,000						
					1.700	3,500					X	
	I. SCHUMANN & COMPANY	YELLOW BRASSES						COPPER	72.00 7440 50 B			
	1. SCHUMARN 5. COMPARY	- 4 EDM'us . Phorespec				3,500		LEAD	3.00 7439-92-1		X	
	I. SCHUMANN & COMPANY	YELLOW BRASSES				3,500		TIN	1.00 7440-31-3		х	
	I, SCHUMANN & COMPANY	YELLOW BRASSES							24,00 7440 66 6	M	¥	
_	I SCHUMANN & COMPANY			.,		3,500		NICKEL	Ø,86 744 0-0 2-0	М	Х	:
	I. SCHUMANN & COMPANY	YELLOW BRASSES			•	-		STRAUG	14888 68	7 ч	¥	
	U.S. SILICA COMPANY	CRYSTALLINE SILICA			-2.,000	4 -000	-1-	- though			Х	
	U.S. SILICA COMPANY	CRYSTALLINE SILICA			2,000	4,600				14		
	DODECH	NIX_STIX_18			21-			**************************************	20.66 1318-94-1	M		X
	BORDEN	NIX STIX 18	3	6	21		3	MUSCOVITE	40.00 64742-89-			X
	BORDEN BORDEN	NIX STIX 18	3	6	21	41		LIGHT ALIPHATIC SOLVENT				
	. Management and the second of	11414 ETTY 16	~3,	6	21	41	2	HEXANE	40,00 110-54-3	**		X
	BORDEN BORDEN	NIX STIX 18 NIX STIX 18	3	6	21	41	1	PROPYLENE CARBONATE	3.00 108-32-7	<u> </u>		X
			30	58	235	392		•		H		X
	BORDEN -	MOLD KOTE 5 HOLD KOTE 5	30	50	235	392	1	TOLUENE	60.00 108-88-3		I 	X
		15.100000000000000000000000000000000000			59	125	6	QUARTZ	29,99 14998-60			
	BORDEN	ALUCOPLUX YB			50		5	TALC	20.00 14907-96-			
	BORDEN	ALUCOFLUX YB				125	7-	AMORPHOUS SILICA	3.00 60676 86			
	BORDEN	ALUCOFLUX -YB			50	125	4	CALCIUM FLUORIDE	20.00 7789-75-9		1)	
	BORDEN	ALUCOFLUX YB			50	_	. 3	HEMATITE	3.00 1317-60-6		1)	
	BORDEN	ALUCOFLUX YB			50		_ 2	BORAX_DECAHYDRATE				
	BORDEN	ALUXOFLUX Y8			50		; 1	CALCIUM CARBONATE	7,50 471-34-1		4	
	BORDEN	ALUCOFLUX YB			50					М	4 7	X
	BORDEN	ALUCOFLUX YB						CALCIUM CARBONATE	70,18 471-34-1	<u> </u>	٠	 Х
	BORDEN	NOL SIL PARTING - RELEASE POWDER FOR MOLDING			200		, 1	OBENIUS CARDONNIE			{ -}	×
_	BORDEN	NOL_SIL_PARTING - RELEASE			200	۱ 4 50	,					
	The second secon	POWDER FOR MOLDING				,,,,	8 2	QUARTZ	Ø.55 148 0 8-60	-7 F	1	X
	BORDEN	NOL SIL PARTING - RELEASE			200	454		Same.				
		•					3 2	PHENOL	3.00 100-95-2	1	4	x
				15	107							

ŧ



May 16, 1995

Mr. Steve Wilson Haynes & Boone 3100 Nationsbank Plaza Dallas, Texas 75202-3789

Re: A & B Foundry

11165 Denton Drive, Dallas, Texas

Mr. Wilson:

ENTACT has completed the waste characterization of several waste streams and process materials at the A & B Foundry located at 11165 Denton Drive in Dallas, Texas. The purpose of this sampling was to classify the identified waste streams for disposal and use the sample results to guide material management activities prior to waste generation.

After observing on site process activities, ENTACT collected nine (9) samples to classify some materials during process activities and after use. Based on the indicator parameters identified during previous EPA sampling events for RCRA Metals, the samples were only analyzed for TCLP Cadmium, TCLP Lead, and TCLP Selenium to limit preliminary analytical expenses. The recent analysis combined with a process knowledge letter may be enough documentation for disposal approval without analyzing for the remaining RCRA Metals during the disposal of these waste streams. If the disposal facility does not accept the process knowledge letter, the remaining metals analysis will be required. We have requested that the samples be held by the laboratory until the waste is approved for disposal.

The following table contains a summary of the sample results from the various waste streams:

Sample	Description	TC	LP Results in mg	/I	Texas
		Cadmium	Lead	Selenium	Waste Class
661-001	Antique Black rinsate drum located in the Finish Area	0.207	<0.050	160	Haz
661-002	White silica sand drums outside adjacent to the trailer	<0.010	0.446	<0.250	2
661-003	Dark grey silica sand drums outside adjacent to the trailer	0.016	24.9	<0.750	Haz
661-004	Brown waste water drum located outside adjacent to the Finishing Area	0.025	0.683	1.22	Haz
661-005	Spent blast sand drums adjacent to the Process Area	0.035	8.48	<0.250	Haz
661-006	Green sand waste drums adjacent to the Process Area	0.188	15.2	<0.250	Haz
661-007	White silica sand drum located in the Core Room	<0.010	0.755	<0.250	2
800-166	Green mold sand stockpiled during processing in the Process Area	0.033	1.63	<0.250	1
661-009	Spent green sand and floor sweepings with sifted metal shavings located in the Clean Up Room	0.113	14.6	<0.250	Haz

NOTE: Waste classifications are based on maximum contaminant concentrations of Selenium > 1.0 mg/l for hazardous, Cadmium > 1.0 mg/l for hazardous, and Lead > 5.0 mg/l for hazardous & < 1.5 mg/l for Class 2. The various classes of waste may be grouped together for disposal.

The above identified waste streams may be grouped for less expensive profiling and disposal. After the grouping of similar waste streams, A & B Foundry would have three (3) types of wastes for disposal. These types of waste would be grouped as hazardous liquids, hazardous spent green sand, and non-hazardous Class 2 silica sand. The liquids are hazardous due to the selenium concentrations, and the spent green sand is hazardous due to the lead concentrations. All of the wastes must receive a Texas Waste Code prior to disposal. The waste coding process requires approximately 14-15 days.

INITIAL WASTE DISPOSAL

The following paragraphs describe the approximate costs for several disposal options for the sampled waste. Some of these options and disposal procedures will change when A & B begins to manage this waste on an "as generated basis". Once the excess waste has been disposed, the segregation of the waste streams throughout the manufacturing process should be A & B's main

focus. The samples indicate in a general sense that the silica sand is non-hazardous when segregated from the spent green sand. The sample result from the in-process stockpiled green sand indicates that the green sand could be a non-hazardous waste if it were removed from the processing at an earlier stage. If it is feasible, it may be less expensive in the long run to cycle the green mold sand more often and dispose of it as a Class 2 waste before it becomes so concentrated with metal fragments that it becomes a hazardous waste.

The non-hazardous Class 2 silica sand drums (12-15 drums or 4-5 cubic yards) may be disposed of in bulk at a local landfill. The estimated disposal cost for a Class 2 solid waste in bulk is \$15-20 per cubic yard, \$75-160, and approximately \$500-550 per load for the delivery and transportation of a roll-off box, this price also includes a few days rental on the roll-off box. Some labor costs will also be incurred to transfer the drums into the roll-off box.

The hazardous sand drums (10-25 drums = 3-10 cubic yards = 4-15 tons) may be disposed of at the hazardous waste landfill in Louisiana or treated on site to non-hazardous levels and disposed of at the local landfill. If we choose the disposal of the sand as a hazardous waste, the profile fee is \$300, the transportation ranges \$1200-1600 for a roll-off box or \$75/drum with a \$225 minimum, the stabilization and disposal is \$280/ton or \$280/drum. The fiber drums will require separate disposal if the waste is shipped in bulk. The approximate cost for on site treatment, sampling, and disposal for approximately 3-10 cubic yards would be \$150-225/cy due to the small quantity. Transportation of the roll-off box to a local landfill will cost \$500-550 per load. Treated waste disposal must receive approval from the TNRCC which requires approximately 4-6 weeks.

The waste water drums (3) can be combined into one hazardous waste stream for disposal purposes. The profile fee would cost \$150. The transportation of the drums on a scheduled pick-up would be \$67/drum with a \$225 minimum. The disposal of the waste water drums is estimated to cost \$300 per drum. A & B will be required to purchase DOT approved drums to contain the waste during shipment.

FUTURE DISPOSAL

Upon completion of the initial disposal of the excess waste drums, we will need to assess the quantity of hazardous waste generated by A & B each month to determine which generator category is applicable. The generator category will determine the time period in which waste can be stored and the reporting requirements. I enclosed a copy of the Small Quantity Generator Handbook from the TNRCC that explains the regulatory guidelines for generator categories. The TNRCC also hosts inexpensive seminars to help generator understand the regulations. The handouts from these seminars may be very helpful to A & B.

Once the generator category has been determined, disposal agreements with several different facilities will need to be established. Most of these disposal locations will be identified during the disposal of the excess waste which has accumulated on site. The profiles and transportation set up during the initial disposal can carry over each year for the waste stream disposal. There are several different options for the future disposal of the generated waste streams.

Due to the Land Disposal Restrictions, the sand exhibiting hazardous lead concentrations must be stabilized or treated prior to landfilling. This can be performed on site if carefully managed or at the landfill. If the hazardous sand is treated at the landfill in Louisiana, the waste will be disposed of as a hazardous waste. If the hazardous sand is treated on site, the waste will be disposed of as a Class 2 waste at a local non-hazardous landfill. The Louisiana landfill is set up to stabilize waste at their facility but the transportation and disposal will cost a lot more. A & B can treat the hazardous sand to non-hazardous Class 2 levels as it is generated if the treatment and storage is managed properly. If the management of the treatment is not closely watched, we could end up with an excess waste situation which could lead to a violation.

The silica sand is a Class 2 waste when it does not become intermingled with the green sand. The segregation of these waste streams is imperative to obtain the best disposal options. The segregated silica sand that already qualifies as a Class 2 waste will not require treatment prior to disposal. The intricacies of the options are extensive and can be better evaluated after the excess waste has been disposed.

I realize that all of this is very confusing to A & B, and it is even difficult for me to try to explain. If you have any questions, please feel free to call me at (214) 580-1323.

Respectfully submitted,

Jennifer L. Hull

Environmental Manager



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403

REPORT DATE : 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

PROJECT : 661 PURCHASE ORDER NO : 2989

Included in this data package are the analytical results for the sample group which you have recently submitted to Inchcape Testing Services for analysis. Accompanying this report are the Chain of Custody and any other supporting materials.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jéffus General Manager



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER: D95-3403-1

REPORT DATE: 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150: Irving, TX 75038
ATTENTION: Ms. Jennifer Hull

SAMPLE MATRIX : Liquid

ID MARKS : 661-001

PROJECT : 661

PURCHASE ORDER NO : 2989

DATE SAMPLED: 13-APR-1995

TEST REQUESTED		DETECTION LIMIT	RESULTS	
Cadmium	/1	0.010 mg/L	0.207	mg/L
Dilution Factor: 1 Prepared using EPA 1311/30 Analyzed using EPA 6010A o QC Batch No: 11090				
ead	/1	0.050 mg/L	< 0.050	mg/L
Dilution Factor : 1 Prepared using EPA 1311/30 Analyzed using EPA 6010A c QC Batch No : 11090				
elenium	/1	2.50 mg/L	160	mg/L
Dilution factor : 10 Prepared using EPA 1311/30 Analyzed using EPA 6010A o QC Batch No : 11090				



1089 E. Collins Blvd, Richardson, TX 75081 Tel. 214-238-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-2

REPORT DATE : 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS : 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Solid

ID MARKS : 661-002

PROJECT: 661 PURCHASE ORDER NO : 2989

DATE SAMPLED : 13-APR-1995

TEST REQUESTED		DETECTION LIMIT		RESULTS
Cadmium	/1	0.010 mg/L	<	0.010 mg/
Dilution Factor: 1 Prepared using EPA 1311/30 Analyzed using EPA 6010A o QC Batch No: 11089	015 on 19-APR-19 on 21-APR-1995 E	095 by A_O by JLW		
.ead	/1	0.050 mg/L		0.446 mg/
Dilution Factor : 1 Prepared using EPA 1311/30 Analyzed using EPA 6010A o QC Batch No : 11089	015 on 19-APR-19 on 26-APR-1995 b	95 by A_O by MPE		
Gelenium	/1	0.250 mg/L	<	0.250 mg/
Dilution Factor : 1 Prepared using EPA 1311/30 Analyzed using EPA 6010A c QC Batch No : 11089	915 on 19-APR-19 on 20-APR-1995 b	95 by A_0 y MES		



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-3

REPORT DATE : 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038 .

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Solid

ID MARKS : 661-003

PROJECT : 661

PURCHASE ORDER NO: 2989

DATE SAMPLED: 13-APR-1995

EST REQUESTED		DETECTION LIMIT	RESULTS
admium	/1	0.010 mg/L	0.016 mg/L
	311/3015 on 19-APR-19 010A on 22-APR-1995 b		
ead	/1	0.050 mg/L	24.9 mg/L
Dilution Factor : 1	711 /7015 10 400 1/	995 hv A N	
Prepared using EPA 1	010A on 20-APR-1995 b		



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-238-5591 Fax. 214-238-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-4

REPORT DATE : 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS : 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Liquid

ID MARKS : 661-004

PROJECT : 661

PURCHASE ORDER NO : 2989

DATE SAMPLED : 13-APR-1995

PREPARATION METHOD : EPA 418.1

PREPARED BY : JLS

PREPARED ON: 18-APR-1995 ANALYSIS METHOD: EPA 418.1 /1

ANALYZED BY : MTR

ANALYZED ON: 18-APR-1995

DILUTION FACTOR: 1 METHOD FACTOR: 25

QC BATCH NO : AB365-84

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	12.5 mg/L	< 12.5 mg/L



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-4

REPORT DATE: 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Liquid

ID MARKS : 661-004

PROJECT : 661

PURCHASE ORDER NO: 2989

DATE SAMPLED: 13-APR-1995

TEST REQUESTED		DETECTION LIMIT	RESULTS
Cadmium	/1	0.010 mg/L	0.025 mg/L
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11090			
Lead	/1	0.050 mg/L	0.683 mg/L
Dilution Factor: 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No: 11090			
Selenium	/1	0.250 mg/L	1.22 mg/l
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11090			1



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-238-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-5

REPORT DATE: 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Solid

ID MARKS : 661-005

PROJECT : 661

PURCHASE ORDER NO : 2989

DATE SAMPLED: 13-APR-1995

TEST REQUESTED		DETECTION LIMIT	RESULTS
Cadmium	/1	0.010 mg/L	0.035 mg/L
Dilution Factor: 1 Prepared using EPA 131 Analyzed using EPA 6010 QC Batch No: 11089			
.ead	/1	0.050 mg/L	8.48 mg/L
Dilution Factor : 1 Prepared using EPA 131 Analyzed using EPA 6010 QC Batch No : 11089			



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-238-5591 Fax. 214-238-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-6

REPORT DATE: 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Solid

PROJECT : 661

ID MARKS : 661-006

PURCHASE ORDER NO : 2989

DATE SAMPLED: 13-APR-1995

TEST REQUESTED		DETECTION LIMIT	RESU	те
m. 3 '			RESU	-19
Cadmium	/1	0.010 mg/L	0.1	38 mg/L
Dilution Factor: 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No: 11089	11/3015 on 19-APR-19 10A on 21-APR-1995 b	95 by A_0 y JLW		
.ead	/1	0.050 mg/L	15.2	mg/L
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11089	11/3015 on 19-APR-19 10A on 26-APR-1995 b	95 by A_O y MPE	•	
elenium	/1	0.250 mg/L	< 0.2	0 mg/L
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11089	11/3015 on 19-APR-19 10A on 20-APR-1995 b	95 by A_O y MES		



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-238-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER: D95-3403-7

REPORT DATE : 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150 : Irving, TX 75038 ATTENTION: Ms. Jennifer Hull

SAMPLE MATRIX : Solid

ID MARKS : 661-007

PROJECT : 661

PURCHASE ORDER NO : 2989

DATE SAMPLED : 13-APR-1995

TEST REQUESTED		DETECTION LIMIT		RESULTS	
admium	/1	0.010 mg/L	<	< 0.010 mg/L	
Dilution Factor: 1 Prepared using EPA 131 Analyzed using EPA 601 QC Batch No: 11089	1/3015 on 19-APR-19 DA on 21-APR-1995 b	95 by A_0 y JLW			
ead	/1	0.050 mg/L		0.755 mg/L	
Dilution Factor : 1 Prepared using EPA 131 Analyzed using EPA 601 QC Batch No : 11089	1/3015 on 19-APR-19 DA on 26-APR-1995 b	95 by A_0 y MPE			
elenium	/1	0.250 mg/L	<	0.250 mg/L	
Dilution Factor: 1 Prepared using EPA 131 Analyzed using EPA 6010 QC Batch No: 11089	1/3015 on 19-APR-19 DA on 20-APR-1995 b	95 by A_O y MES			



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-238-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER : D95-3403-8 REPORT DATE : 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION: Ms. Jennifer Hull

SAMPLE MATRIX : Solid

ID MARKS : 661-008

PROJECT : 661

PURCHASE ORDER NO : 2989

DATE SAMPLED: 13-APR-1995

EST REQUESTED		DETECTION LIMIT		RESULTS
Cadmium	/1	0.010 mg/L		0.033 mg/L
Dilution Factor : 1 Prepared using EPA 131 Analyzed using EPA 6010 QC Batch No : 11089	1/3015 on 19-APR-19 0A on 21-APR-1995 b	95 by A_0 by JLW		
ead	/1	0.050 mg/L		1.63 mg/L
Dilution Factor : 1 Prepared using EPA 131 Analyzed using EPA 6010				
QC Batch No : 11089				
QC Batch No : 11089	/1	0.250 mg/L	<	0.250 mg/L



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-258-5592

DATE RECEIVED : 14-APR-1995

REPORT NUMBER: D95-3403-9

REPORT DATE: 27-APR-1995

SAMPLE SUBMITTED BY : Entact

ADDRESS: 1616 Corporate Court Suite 150

: Irving, TX 75038

ATTENTION : Ms. Jennifer Hull

SAMPLE MATRIX : Solid

ID MARKS : 661-009

PROJECT : 661

PURCHASE ORDER NO: 2989

DATE SAMPLED : 13-APR-1995

TEST REQUESTED		DETECTION L	IMIT	RESULTS
Cadmium	/1	0.010 m	g/L	0.113 mg/L
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11089	311/3015 on 19-APR-19 010A on 21-APR-1995 b	95 by A_O y JLW		
Lead	/1	0.050 mg	j/L	14.6 mg/L
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11089	311/3015 on 19-APR-19 310A on 26-APR-1995 b	95 by A_O y MPE		
Selenium	/1	0.250 mg	g/L <	0.250 mg/L
Dilution Factor : 1 Prepared using EPA 13 Analyzed using EPA 60 QC Batch No : 11089	511/3015 on 19-APR-19 110A on 20-APR-1995 b	95 by A_O y MES	}	



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-258-5592

REPORT DATE : 27-APR-1995

REPORT NUMBER : D95-3403

SAMPLE SUBMITTED BY : Entact ATTENTION : Ms. Jennifer Hull

PROJECT : 661

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Total Recoverable Hydrocarbons	Cadmium	Cadmium	Lead
BATCH NO.	AB365-84	11090	11089	11090
LCS LOT NO.	. AA345-888	590302,590329	590302	590302,590329
PREP METHOD	EPA 418.1	EPA 1311/3015	EPA 1311/3015	EPA 1311/3015
PREPARED BY	JLS	A_0	A_O	A_0
ANALYSIS METHOD	EPA 418.1	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	MTR	MPE	JLW	JĽW
UNITS	mg/L	mg/L	mg/L	mg/L
METHOD BLANK	< 0.50	< 0.01	<.010	< 0.05
SPIKE LEVEL	5.00	1.00	1.00	1.00
MS RESULT	RESULT NS		1.04	1.01
MS RECOVERY %	NS	104	104	95.7
MSD RESULT	NS	1.04	1.05	1.04
MSD RECOVERY %	NS	104	105	98.5
MS/MSD RPD %	NS	0.58	1.24	2,88
8S RESULT	5.15	NA	NA	NA
BS RECOVERY %	103	NA	NA	NA
BSD RESULT	4.98	NA	NA	NA .
BSD RECOVERY %	99.6	NA	NA	NA NA
BS/8SD RPD %	3.36	NA	NA	NA
OUPLICATE RPD %	NA	NC	NC	NC
LCS LEVEL	5.00	1.00	1.00	1.00
CS RESULT	5.02	10.6	1.05	1.03
CS RECOVERY %	100	1060	105	103
SPIKE SAMPLE ID		3353-13	3379-1	3353-13
OUP SAMPLE ID		3353-13	3379-1	3353-13

Insufficient sample available for MS/MSD. BS/BSD used.

Not applicable Not calculable



1089 E. Collins Blvd. Richardson, TX 75081 Tel. 214-258-5591 Fax. 214-238-5592

REPORT DATE : 27-APR-1995

REPORT NUMBER : D95-3403

SAMPLE SUBMITTED BY : Entact

ATTENTION : Ms. Jennifer Hull

PROJECT : 661

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Lead	Selenium	Selenium
BATCH NO.	11089	11090	11089
LCS LOT NO.	590302,590329	590302,590329	590302
PREP METHOD	EPA 1311/3015	EPA 1311/3015	EPA 1311/3015
PREPARED BY	A_0	A_O	A_0
ANALYSIS METHOD	EPA 6010A	EPA 6010A	EPA 6010A
ANALYZED BY	MPE	MES	MES
UNITS	mg/L	mg/L	mg/L
METHOD BLANK	< 0.05	<0.25	<0.250 .
SPIKE LEVEL	1000	5.00	5.00
MS RESULT	1070	5.47	5.54
MS RECOVERY %	107	109	111
MSD RESULT	1070	5.38	5.54
MSD RECOVERY %	107	108	111
MS/MSD RPD %	0.37	1.70	0.11
BS RESULT	NA	NA	NA
BS RECOVERY %	NA	NA	NA
BSD RESULT	NA	NA	NA
BSD RECOVERY %	NA	NA	NA
BS/BSD RPD %	NA	NA	NA
DUPLICATE RPD %	NC	NC	NC
LCS LEVEL	1000	5.00	5.00
LCS RESULT	1070	5.38	5.39
LCS RECOVERY %	107	108	108 ·
SPIKE SAMPLE ID	3379-1	3353-13	3379-1
DUP SAMPLE ID	3379-1	3353-13	3379-1

Not applicable Not calculable

JHA... OF JUSTULY

ENTACT
environmental tactics in waste management

1616 Corporate Court #150 Irving, Texas 75038 214/580-1323 1-800-788-8897 FAX: 214/550-7464

ENTACT P.O. No.:	2969

Job No.: (;()

Sampler: | | | | | |

Date: 4-13-7

ENTACT Contact:

	Sample No.	Type of Sample	Description/Remarks	Preservative	Analysis 3402
<u>ا</u> ا	(61-001	Composite	Antique black sinsale water	None	ABC -
50	11 Ja 600-111	Composite	Silver sand drums adjunt to trailer-w	hite Han	1BC -2
SD	661-003 · ·	Camposite	Silver sand home indiprent to trailer - white/black	New	16C-3
	661:004 4	Gish	Brown waste water dram	4°C	ABCD -4
SD	· 661-005 A	Camposite	Spint sand bloor sand dum.	None	13C -5
5	661-006 H	Camposite	Green sund waste downs adjust to process	ezu Nam	ABC -6
\-	661-007 x	Grah'	Silica send divmin Con Ross - White	Nene	ABL -
	661-008 =	Camposite	Green sand from process area	None	ABC -8
50	· 601-009 +	(b. id.	Sifted metal waste & sand	None	LABC -9
	-				
	.	1 111	412.45	ANALVOIO	-

Samples Received By: 43.45	ANALYSIS
	$A = \frac{1}{1} $
Samples Received By: Date 1-14-95 [3:30]	B = TCLP Salonium G =
Samples Relinquished By: Date Samples Relinquished By: Date Date 1-14-45 78:50	C = TCLP Cadmium
Samples Received By: B.W. Open 4-14-951750	D=TPH JAINAL
Samples Relinquished By:	E = J =

COOLER TEMPERATURE WHEN RECEIVED °C

SCREENED FOR RADIOACTIVITY

DISTRIBUTION

Original — To Custom~ w/Final Report 2nd Copy — To Job 3rd Copy — To Lab



P.O. BOX 153469 IRVING, TEXAS 75015-3469 TEL. (214)986-1745 METRO (214)399-1828

LABORATORY TEST CERTIFICATE

April 20, 1994

Entact 6025 Commerce #500 Las Colinas Irving, TX 75063

Report: 0464-19-1491

Sample: Job: 661 PO#: 2007

Sample: 001

TCLP:

The Sample was leached using Toxicity Characteristic Leaching Procedure (TCLP), EPA SW-846, Method 1311.

HAZARDOUS WASTE NO

CONTAMINANT

CONCENTRATION

FOUND (mg/1)

Methods

800D

Manager

Lead

1.61

SW-846-Method 6010A

SOUTHERN SPECTROGRAPHIC LABORATORY



P.O. BOX 153469 IRVING, TEXAS 75015-3469 TEL. (214)986-1745 METRO (214)399-1828

March 1, 1994

Entact 6025 Commerce #500 Las Colinas Irving, TX 75063

Report: 0264-25-1269

Sample: Job: 661

Sample 002, Composite Sand (Black)

TCLP:

The Sample was leached using Toxicity Characteristic Leaching Procedure (TCLP), EPA SW-846, Method 1311.

HAZARDOUS WASTE NO	CONTAMINANT	CONCENTRATION FOUND (mg/l)	Methods	
D008	Lead Zinc	63.1 65.5	SW-846-Method SW-846-Method	

SOUTHERN SPECTROGRAPHIC LABORATORY

Clara Myers Manager



P.O. BOX 153469 IRVING, TEXAS 75015-3469 TEL. (214)986-1745 METRO (214)399-1828

March 1, 1994

Entact 6025 Commerce #500 Las Colinas Irving, TX 75063

Report: 0264-25-1268

Sample: Job: 661

Sample 001, Composite Sand (White)

Totals:

Lead

82.7 ppm

Zinc

490.8 ppm

SOUTHERN SPECTROGRAPHIC LABORATORY

Manager



P.O. BOX 153469 IRVING, TEXAS 75015-3469 TEL. (214)986-1745 METRO (214)399-1828

March 1, 1994

Entact 6025 Commerce #500 Las Colinas Irving, TX 75063

Report: 0264-25-1270

Sample: Job: 661

Sample 003, Acid Rinse

pH:

рН 3.38

Totals:

0.16 mg/lArsenic Barium 0.05 Cadimum 0.01 Chromium 0.52 5,0 11.1 Lead Mercury < 0.05 88.4 Selenium Silver 0.01

SOUTHERN SPECTROGRAPHIC LABORATORY

Clara Myers

Manager



6025 Commerce #500 Las Collinas Irving, Texas 75063 214/580-1323 1-800-788-8897 FAX: 214/550-7464

CHA	NI	OF	CUS	TODY

	``	\cap	$^{\sim}$	٦
ENTACT P.O. No.:	$\sqrt{}$	ار	Ü	j

Job No.:	UVI	
	7 13 64	

EI

	i i fan i	
ENTACT Contact:	deante Hill	

Sample No.	Type of Sample	Description/Remarks	Preservative	Analysis
GGI	Camposite	CO Sind (While)	4°(C.D
CUJ	Composite	Car Sand (bluk)		EF
0.03	Coah	Acid Rinsete		AB
	\ 1 . . .			

Samples Received By: 2-23-94	ANALYSIS
Samples Relinquished By:	A = Total Metals F= TUP Zinc
Samples Received By: 3-3-94	B= G=
Samples Relinquished By:	$C = \frac{2inc}{(T_{crit})} \qquad H = \frac{1}{(T_{crit})}$
Samples Received By:	D= Lew (Tout) =
Samples Relinquished By:	E= 1(L) L(n) J=

DISTRIBUTION:

Original — To Customer w/Final Report 2nd Copy — To Job File 3rd Copy — To Lab

APPENDIX C PREVIOUS WASTE TREATMENT AND DISPOSAL DOCUMENTATION





November 9, 1995

Mrs. Debra Whitehead BFI P.O. Box 679 Hutchins, TX

RE: A&B Foundry

11165 Denton Drive

Dallas, Texas

Mrs. Whitehead:

The lead contaminated soil at the A&B Foundry facility was stabilized with a patent pending phosphate based proprietary additive at a 1-8% sand to additive ratio. The ratio was based on process knowledge of site activities and characteristics of the silica sand used at the site. The sand was stabilized in batches inside a container in accordance with the applicable federal and state regulations. Additive was mixed into the silica sand in the appropriate ratios and mixed with a trackhoe until a homogeneous mixture was achieved. A fine mist of water was added during the stabilization process to assist in the chemical stabilization process and to control air emissions.

We normally perform the stabilization process in a treatment train with a shredder, screen, pugmill, hammer mill, silo, and conveyors, but the small volumes involved in this project required manual stabilization with heavy equipment. We normally perform a treatability study to determine the exact minimum additive ratio to minimize cost on larger projects. On this project, we based our additive selection and ratio on the numerous treatability studies and field activities we have performed in the United States.

If you have any additional questions, please contact me at (214) 580-1323.

Respectfully submitted,

Jennifer L. Hull

Environmental Manager

Irving, Texas 75038

Suite #150



BFI WASTE CODE

WASTE APPROVAL REQUEST				
BFI to complete this area. BFI Initiator: Location: Company Number: Telephone: () Fax: () Date:	Action Requested: □New Waste Approval □ Up-Date Approval - Previous Number: □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□			
	ACTERIZATION DATA IAL WASTE			
IMPORTANT: THIS FORM IS TO BE COMPLETED BY A REPRESENTA INSTRUCTIONS BEFORE COMPLETING THIS FORM. THIS FORM IS LEGIBLY PRINTED IN INK, AND SIGNED.				
1. GENERA	TOR INFORMATION			
a) Generator's Name: As B Foundry b) Generating Facility's Address: IIV5 Darton Prive City: Dallas State: TX Zip: 15004 c) Generator's Representative: Sabrina Lindsay Title: Osciator Telephone: (214) 247: 3579 Fax: () d) Emergency/Information Contact: Juna Fir Hull Title: Project Hununger Telephone: (214) 580: 1323	e) State/Provincial/Local Registration No.: XXXXX4 Generator's EPA Id. No.: Industry Description/SIC Code: f) Customer's Name: Same as Gaunater g) Customer's Mailing Address: City: State: Zip: h) Representative: Telephone: () Fax: ()			
NAME OF THE PARTY	TE STREAM INFORMATION			
a) Name/Description of The Waste: b) Process Generating Waste: c) Is this a treatment residue of a waste which was previously a restricte If yes, describe the waste and the process generating the waste prior d) Is this a "Hazardous Waste" as defined by State, Provincial, or local F If yes, enter the Waste Identification Number if one has been assignee) Is this a "Special Waste", an "Industrial Process Waste", or a "Pollution Process Waste" or a "Pollution Process Waste" or a "Pollution Recommended personal protection equipment and special handling p	ed hazardous waste?			
g) Anticipated Volume:	_			
3. WASTE	PROPERTIES AT 72°F			
a) Physical State: Solid Semi-solid Powder Liquid Combination b) Layers: Single-layered Bi-layered Multi-layered c) Colors(s): Describe	e) Density Range:			
d) Odor: Describe	g) pH: □ ≤2 □ 2.1 - 5.0 % 5.1 - 9.0 □ 9.1 - 12.4 □ ≥ 12.5 □ N/A □ N/D			





Dallas District

November 10,1995
ENTACT INCORPORATED
A & B Foundry,11165 Denton Drive,Dallas,Texas 75229
1616 Corporate Court, Suite 150
Irving, Texas 75038
Attn: Jennifer L. Hull

Re: Waste Disposal Approval

Ms. Hull:

The following waste stream has been approved by our BFI Special Waste Coordinator for disposal at our BFI Itasca, Texas Landfill. The following may be transported at any time with the proper Manifest(s).

WASTE STREAM Stabilized Lead Contaminated Foundry Sand (50 Cubic Yards)

T.N.R.C.C.No. D8N73022 BFI WASTE CODE # TX/759/961109/238072

If I can be of further assistance to you, please do not hesitate to call.

Sincerely,

Nick Carter

North Texas Landfill Division



WASTE APPROVAL FORM

Date

: 11/09/95

BFI Location

: North Texas Landfill District

BFI Initiator

: Whitehead, Debra

Generator

: A & B Aluminum and Brass Foundry, Inc.

Generator Location : Dallas, TX

WCD Number

: AB59938

BFI Number

: 238072

WASTE DESCRIPTION:

SAFETY PRECAUTIONS: Avoid Skin and Eye Contact.

RECOMMENDED MANAGEMENT: Direct Burial

Facility... North Texas Landfill District

COMMENTS:

Approved for Itsca Landfill/241-A from the facility at 11165 Denton Drive. TNRCC waste code/registration numbers are D8N73022/XXX04.

The following items were reviewed by the Special Waste Coordinator:

- 1. WCD signed and dated November 9, 1995.
- Letter from Entact dated November 9, 1995.
- One-Time Shipment Notice dated October 24, 1995.
- 4. TCLP metals from Atomus for untreated and TCLP metals and TCLP lead from Southern Spectrographic Laboratory on treated with COC.

The above is a recommendation of BFI. It must be understood that management of the waste for treatment and/or disposal at the designated facility must be in compliance with the facility's permit and applicable federal, state, and local regulations. The waste is based upon a review of the information provided by the generator and is contingent upon the receipt at the treatment and/or disposal facility of a waste material essentially equivalent in chemical composition and physical properties to that as defined above.

This waste stream has been assigned BFI Waste Code: TX/759/961109/238072

Paula J. Carboni

Special Waste Coordinator



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

ONE-TIME SHIPMENT REQUEST FOR TEXAS WASTE CODE FOR SHIPMENT OF CLASS 1, 2, 3 AND EPA HAZARDOUS WASTE

Pursuant to the generator notification requirements of 30 TAC Section 335.6, the generator of a solid waste is required to submit to the TNRCC detailed written information pertaining to the composition and characteristics of the waste.

		Please type	or print le	gibly:		
Mr. Bob Lindson A&B Aluminum & Brass Foundry 11165 Denton Drive	7	GENERATO GENERATO GENERATO	R COMP. R MAILIN	ANY NA IG ADD	ME	
L Oallas, TX 75229		CITY, STATI				
Solid Waste Registration No. Solid Waste Registration No. Are you CESQG? U. S. EPA Identification No.		If industrial, tnitial Notific Date submit	ation pac	ket? 🛍		1
Generating Site Location (Check I same as above) (Designated Treatment, Storage, and/or Disposal Facility Name and Add	STREET ADDRESS	FILL BEL	SCRIPTION	ns Cu G	idens	
Designated Treatment, Storage, and/or Disposal Facility Name and Acc					····	
DESCRIPTION OF WASTE	TNRCC USE			S WAS	EPA	ORIGIN
(do not use OOT description or trade name)	For TNRCC Ass Texes Waste Co		FORM	CLASS CODE	CODE	CODE
1. Stabilized Lead Contaminated Founding Sand	<u>D8N73</u>	30,22	30.5	2	~~	
2.						
3						
4						
GENERATOR/REPRESENTATIVE						<u> </u>
I certify that the above information is correct to the best of my	PROCESSED	DATE: /	1:24	45		
knowledge.	PROCESSED	DBY: Id	<i>'</i>			
ENTACT Ploase Print)	TNRCC REG	-/ ///	F		OFFIC	=
16/6 Corporate Company NAME) Iving IX 75038.	1.7	NRCC & HW, Waste	Evaluatio	n Section	n n	
and am authorized to sign this certification for:	CVP	Veste Report A .O. Box 13087 Justin, Texas 7 Thone: (512) 23	8711-308	i7		i-6410
10-19-95	, 214,	580-13	DNE NUMBE			
(SIGNATURE)						



P.O. 80X 153469 IRVING, TEXAS 75015-3469 TEL. (214) 986-1745 METRO (214) 389-1826 FAX (214) 399-1826

November 9, 1995

Entact

1616 Corporate Court #150 Irving, TX 75038

Report: 1185-08-143

Sample: Job 661

Batch #1 Box #1 Composite

The Sample was leached using Toxicity Characteristic Leaching Procedure (TCLP), EPA SW-846, Method 1311.

HAZARDOUS WASTE NO	CONTAMINANT	CONCENTRATION FOUND (mg/1)	Methods
D004 D005 D006 D007 D008 D009 D010	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	< 0.10 0.03 < 0.03 < 0.03 < 0.05 < 0.02 < 0.10 < 0.01	SW-846-Method 6010A SW-846-Method 6010A SW-846-Method 6010A SW-846-Method 6010A SW-846-Method 6010A SW-846-Method 7470A SW-846-Method 6010A SW-846-Method 6010A

SOUTHERN SPECTROGRAPHIC LABORATORY

Manager

Samples are discarded 30 days after reports are mailed unless prior arrangements are made. Our letters and reports apply to the sample tested and/or inspected and are not necessarily indicative of the qualities of apparently identical or similar products



P.O. BOX 153469 IRVING, TEXAS 75015-3469 TEL (214) 986-1745 METRO (214) 399-1828 FAX (214) 399-1828

LABORATORY TEST CERTIFICATE

November 9, 1995

Entact 1616 Corporate Court #150 Irving, TX 75038

Report: 1185-08-144

Sample: Job 661

Batch #2 Box 2

Composite

TCLP:

Manager

The Sample was leached using Toxicity Characteristic Leaching Procedure (TCLP), EPA SW-846, Method 1311.

HAZARDOUS CONCENTRATION

WASTE NO CONTAMINANT FOUND (mg/1) Methods

요크림왕부경로린발드과 학생환경원근장보상점원부드급교드트 발생장 및 만성드로드특성하고 모임노도 교육및 목대학자로 대학보 D008 Lead < 0.05 SW-846-Method 6010A

SOUTHERN SPECTROGRAPHIC LABORATORY

Sumplex are discarded 30 days after reports are mailed unless prior arrangements are made. Our letters and reports apply to the sample tested and/or inspected and are not necessarily indicative of the qualities of apparently identical or similar products.

JHA... OF JUSTULY



1616 Corporate Court #150 Irving, Texas 75038 214/580-1323 1-800-788-8897 FAX: 214/550-7464

ENTACT P.O. No.:	Job No.:	661	
		1 1	

Sampler: J' MARK.

Date: 11/1/93

ENTACT Contact: Jewille Hall

Sample No.	Type of Sample	Description/Remarks	Preservative	Analysis
661. Box #3	Composite	Stabilized Founday SANA	None	A
				1.5%, 0.04

Samples Received By:		ANALYSIS		
Samples Relinquished By: Aang Wach	Date /////95	A= TCLP LO	10l F=	
Samples Received By: Dava Myer	Date Date	B =	G =	
Samples Relinquished By:	Date	C =	H=	
Samples Received By:	Date	D =	=	
Samples Relinquished By:	Date	E =	J =	

DISTRIBUTION

Original — To Customer w/Final Report 2nd Copy — To Job File 3rd Copy — To Lab



P.O. BOX 153469 IRVING, TEXAS 76015-3469 TEL. (214) 986-1745 METRO (214) 399-1826 FAX (214) 399-1826

LABORATORY TEST CERTIFICATE

November 9, 1995

Entact 1616 Corporate Court #150 Irving, TX 75038

Report: 1185-08-145

Sample: Job 661

Batch #3 Box 3

Composite

TCLP:

The Sample was leached using Toxicity Characteristic Leaching Procedure (TCLP), EPA SW-846, Method 1311.

HAZARDOUS WASTE NO

CONCENTRATION

FOUND (mg/l)

CONTAMINANT

Methods

D008

Manager

Lead

< 0.05

SW-846-Method 6010A

SOUTHERN SPECTROGRAPHIC LABORATORY

Samples are discarded 30 days after reports are mailed unless prior arrangements are made. Our letters and reports apply to the sample tested and/or inspected and are not necessarily indicative of the qualities of apparently identical or similar products

CHAIN OF CUSTODY



1616 Corporate Court #150 Irving, Texas 75038 214/580-1323 1-800-788-8897 FAX: 214/550-7464

ENTACT P.O. No.:	
------------------	--

Job No.: _______

Sampler: G. MAR Ku

Date: 11/8/53

ENTACT Contact: Journiles Hall

Sample No.	Type of Sample	Description/Remarks	Preservative	Analysis
661- Box #3	Composite	Stabilized Founday SAND	None	A

Samples Received By:	ANALYSIS		
Samples Relinquished By: A any Mach 1/1/95	A= TCCP Le	4J F=	
Samples Received By: Our My //-87 Date Date	B =	G =	
Samples Relinquished By:	C =	H=	
Samples Received By:	D ==		
Samples Relinquished By:	E =	J =	

DISTRIBUTION

Original — To Customer w/Final Report 2nd Copy — To Job File 3rd Copy — To Lab